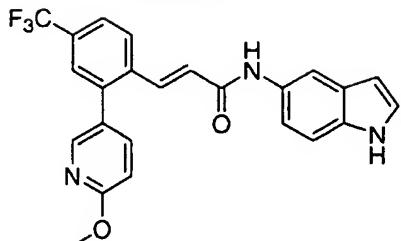


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**Example 100**



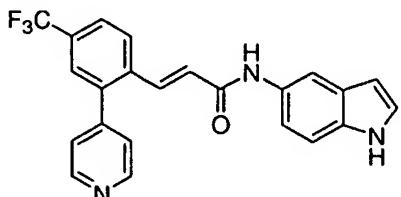
**(2E)-N-indol-5-yl-3-[2-(6-methoxy(3-pyridyl))-4-(trifluoromethyl)phenyl]-prop-2-enamide.**

5 A mixture of (2E)-3-[2-bromo-4-(trifluoromethyl)phenyl]-N-indol-5-ylprop-2-enamide, **Example 97**, (100 mg, 0.24 mmol), 2-methoxy-5-pyridineboronic acid (60 mg, 0.39 mmol, Digital Specialty Chemicals), tris(dibenzylideneacetone)-dipalladium(0) (22 mg, 0.024 mmol, Aldrich) and triphenylphosphine (26 mg, 0.098 mmol, Aldrich) in toluene (1.2 mL), 2.0M aqueous Na<sub>2</sub>CO<sub>3</sub> (0.4 mL) and

10 ethanol (0.4 mL) was stirred at 120 °C overnight. The reaction mixture was filtered through a pad of Celite and diluted with water (50 mL). The aqueous phase was extracted with EtOAc (3 x 60 mL). The combined extracts were washed with satd NaCl (100 mL), dried over Na<sub>2</sub>SO<sub>4</sub>, filtered and concentrated in vacuo. Purification by silica gel chromatography (gradient: 0-20% EtOAc in

15 hexane) provided the title product as a yellow solid. MP 219-221 °C. MS (ESI, pos. ion) *m/z*: 438 (M+1).

**Example 101**



**(2E)-N-Indol-5-yl-3-[2-(4-pyridyl)-4-(trifluoromethyl)phenyl]prop-2-enamide.**

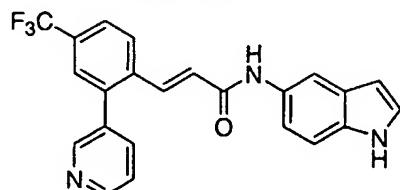
20

Analogous to the procedure used to prepare **Example 100**, (2E)-3-[2-bromo-4-(trifluoromethyl)phenyl]-N-indol-5-ylprop-2-enamide, **Example 97**, (120 mg, 0.29 mmol) and pyridine-4-boronic acid (72 mg, 0.59 mmol, Frontier Scientific) provided, after purification by silica gel chromatography (gradient: 0-60 %EtOAc

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in hexane), the title product as a yellow solid. MP 229-234 °C. MS (ESI, pos. ion)  $m/z$ : 408 (M+1).

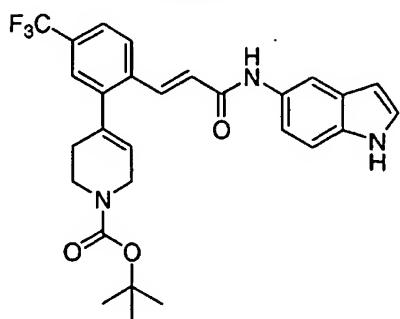
**Example 102**



5   **(2E)-N-Indol-5-yl-3-[2-(3-pyridyl)-4-(trifluoromethyl)phenyl]prop-2-enamide.**

Analogous to the procedure used to prepare **Example 100**, (2E)-3-[2-bromo-4-(trifluoromethyl)phenyl]-N-indol-5-ylprop-2-enamide, **Example 97**, (120 mg, 0.29 mmol) and pyridine-3-boronic acid (58 mg, 0.47 mmol, Frontier Scientific) provided, after purification by silica gel chromatography (gradient: 0-20 %EtOAc in hexane), the title product as a yellow solid. MP 196-197 °C. MS (ESI, pos. ion)  $m/z$ : 408 (M+1).

**Example 103**



15   **tert-Butyl 4-{2-[(1E)-2-(N-indol-5-ylcarbamoyl)vinyl]-5-(trifluoromethyl)phenyl}-1,2,5,6-tetrahydropyridinecarboxylate.**

Analogous to the procedure used to prepare **Example 100**, (2E)-3-[2-bromo-4-(trifluoromethyl)phenyl]-N-indol-5-ylprop-2-enamide, **Example 97**, (100 mg, 0.24 mmol) and 4-(4,4,5,5-tetramethyl-[1,3,2]dioxaborolan-2-yl)-3,6-dihydro-2H-pyridine-1-carboxylic acid *tert*-butyl ester (130 mg, 0.42 mmol, prepared according to the procedures of Wustrow, D. J. et al, *Synthesis* 1991, 993 and Ishiyama, T. et al, *J. Org. Chem.* 1995, 60, 7508) provided, after purification by

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silica gel chromatography (gradient: 0-35 %EtOAc in hexane), the title product as an amorphous yellow solid. MS (ESI, pos. ion) *m/z*: 512 (M+1).

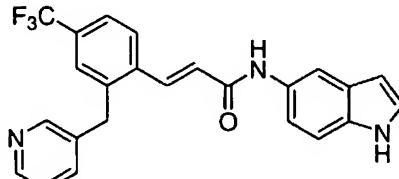
**Example 104**



5    **(2E)-N-Indol-5-yl-3-[2-(1,3-thiazol-2-yl)-4-(trifluoromethyl)phenyl]prop-2-enamide.**

Analogous to the procedure used to prepare **Example 100**, (2E)-3-[2-bromo-4-(trifluoromethyl)phenyl]-N-indol-5-ylprop-2-enamide, **Example 97**, (100 mg, 0.24 mmol) and 2-tributylstannylthiazole (155 mg, 0.42 mmol, Frontier Scientific) provided, after purification by silica gel chromatography (gradient: 0-35 %EtOAc in hexane), the title product as an orange solid. MP 203-204 °C. MS (ESI, pos. ion) *m/z*: 414 (M+1).

**Example 105**



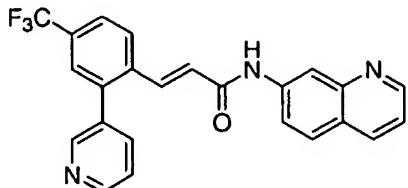
15    **(2E)-N-Indol-5-yl-3-[2-(3-pyridylmethyl)-4-(trifluoromethyl)phenyl]prop-2-enamide.**

A mixture of (2E)-3-[2-bromo-4-(trifluoromethyl)phenyl]-N-indol-5-ylprop-2-enamide, **Example 97**, (110 mg, 0.27 mmol), 3-(tributylstannylmethyl)pyridine, **Example 90(a)**, (160 mg, 0.43 mmol), tris(dibenzylideneacetone)dipalladium(0) (24 mg, 0.027 mmol, Aldrich) and triphenylphosphine (28 mg, 0.11 mmol, Aldrich) in 1-methyl-2-pyrrolidinone (1.5 mL) was stirred at 100 °C overnight. The reaction mixture was filtered through a pad of Celite and diluted with water (50 mL). The aqueous phase was extracted with EtOAc (3 x 60 mL). The combined organic extracts were washed with satd NaCl (100 mL), dried over Na<sub>2</sub>SO<sub>4</sub>, filtered and concentrated in vacuo. Purification by silica gel chromatography (gradient: 0-70 % EtOAc in hexane)

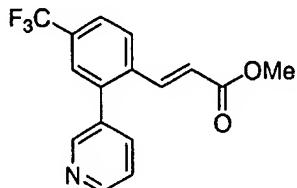
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provided the title compound as an orange solid. MP 202-203 °C. MS (ESI, neg. ion)  $m/z$ : 420 (M-1).

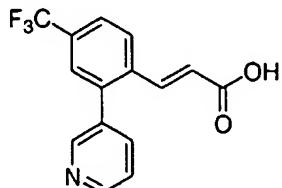
**Example 106**



5   **(2E)-3-[2-(3-Pyridyl)-4-(trifluoromethyl)phenyl]-N-(7-quinolyl)prop-2-enamide.**



(a) **Methyl (2E)-3-[2-(3-pyridyl)-4-(trifluoromethyl)phenyl]prop-2-enoate.** A mixture of methyl (2E)-3-[2-bromo-4-(trifluoromethyl)phenyl]prop-2-enoate,  
10   **Example 97(d)**, (585 mg, 1.89 mmol), pyridine-3-boronic acid (950 mg, 2.8 mmol, Frontier Scientific), tris(dibenzylideneacetone)dipalladium (0) (170 mg, 0.19 mmol, Aldrich) and triphenylphosphine (200 mg, 0.76 mmol, Aldrich) in toluene (5 mL), 1.0 M aqueous  $\text{Na}_2\text{CO}_3$  (2 mL) and ethanol (2 mL) was stirred at 80 °C under  $\text{N}_2$  overnight. The reaction mixture was filtered  
15   through a pad of Celite and diluted with water (60 mL). The aqueous phase was extracted with EtOAc (3 x 60 mL). The combined organic extracts were washed with satd  $\text{NaCl}$  (100 mL), dried over  $\text{Na}_2\text{SO}_4$ , filtered and concentrated in vacuo. Purification by silica gel chromatography (gradient: 0-35% EtOAc in hexane) provided the title product as a yellow solid. MS (ESI, pos. ion)  $m/z$ : 308 (M+1).



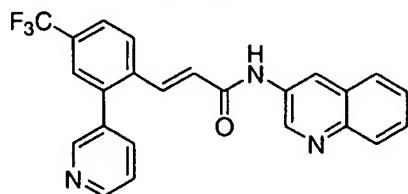
20   (b) **(2E)-3-[2-(3-Pyridyl)-4-(trifluoromethyl)phenyl]prop-2-enoic acid.** A mixture of methyl (2E)-3-[2-(3-pyridyl)-4-(trifluoromethyl)phenyl]prop-2-enoate,

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**Example 106(a)**, (540 mg, 1.8 mmol) and LiOH monohydrate (370 mg, 8.8 mmol) in wet ethanol (5 mL) was stirred at room temperature overnight. The reaction mixture was neutralized with aqueous HCl (2.0 M, 4.4 mL, 8.8 mmol) and concentrated under reduced pressure. The material was dried under vacuum  
5 at 60 °C for 4 h to provide 955 mg of the crude material, which contained LiCl as a byproduct. MS (ESI, pos. ion) *m/z*: 294 (M+1).

**(c) (2E)-3-[2-(3-Pyridyl)-4-(trifluoromethyl)phenyl]-N-(7-quinolyl)prop-2-enamide.** Analogous to the procedure used to prepare **Example 1**, (2E)-3-[2-(3-pyridyl)-4-(trifluoromethyl)phenyl]prop-2-enoic acid, **Example 106(b)**, (185 mg)  
10 and 7-aminoquinoline (64 mg, 0.44 mmol, Specs) provided, after purification by silica gel chromatography (gradient: 0-75% EtOAc in hexane), the title compound as an amorphous off-white solid. MS (ESI, pos. ion) *m/z*: 420 (M+1).

**Example 107**

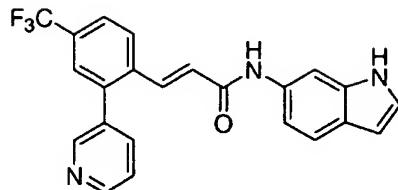


**15 (2E)-3-[2-(3-Pyridyl)-4-(trifluoromethyl)phenyl]-N-(3-quinolyl)prop-2-enamide.**

Analogous to the procedure used to prepare **Example 1**, (2E)-3-[2-(3-pyridyl)-4-(trifluoromethyl)phenyl]prop-2-enoic acid, **Example 106(b)**, (185 mg) and 3-aminoquinoline (64 mg, 0.44 mmol, Aldrich) provided, after purification by silica  
20 gel chromatography (gradient: 0-45% EtOAc in hexane), the title compound as a white solid. MP 196-199 °C. MS (ESI, pos. ion) *m/z*: 420 (M+1).

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**Example 108**

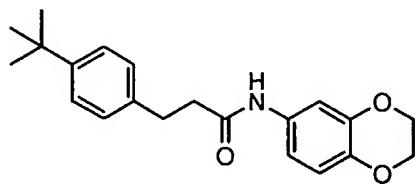


**(2E)-N-Indol-6-yl-3-[2-(3-pyridyl)-4-(trifluoromethyl)phenyl]prop-2-enamide.**

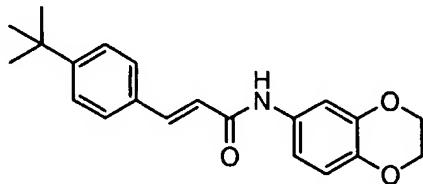
5 Analogous to the procedure used to prepare **Example 1**, (2E)-3-[2-(3-pyridyl)-4-(trifluoromethyl)phenyl]prop-2-enoic acid, **Example 106(b)**, (185 mg) and 6-aminoindole (59 mg, 0.44 mmol, Aldrich) provided, after purification by silica gel chromatography (gradient: 0-50% EtOAc in hexane), the title compound as an amorphous orange solid. MS (ESI, pos. ion) *m/z*: 408 (M+1).

10

**Example 109**



**N-(2H,3H-Benzo[3,4-e]1,4-dioxan-6-yl)-3-[4-(tert-butyl)phenyl]propanamide.**



15 (a) **(2E)-N-(2H,3H-Benzo[3,4-e]1,4-dioxan-6-yl)-3-[4-(tert-butyl)phenyl]-prop-2-enamide.** A solution of 4-*t*-butyl-*trans*-cinnamic acid (500 mg, 2.45 mmol, EMKA-Chemie) in anhydrous CH<sub>2</sub>Cl<sub>2</sub> (10 mL) was magnetically stirred and treated with oxalyl chloride (0.22 mL, 2.5 mmol, Aldrich) and DMF (0.005 mL). The reaction mixture was stirred at reflux for 30 min, then concentrated in vacuo. The residue was dissolved in acetone (1 mL) and added to

20 a mixture of 1,4-benzodioxan-6-amine (370 mg, 2.45 mmol, Aldrich) and K<sub>2</sub>CO<sub>3</sub> (500 mg) in acetone (2 mL) and water (4 mL), stirred at 0 °C. The reaction mixture was vigorously stirred at 0 °C for 30 min, then diluted with ice water (50 mL). The resulting solid precipitate was collected by filtration and dissolved

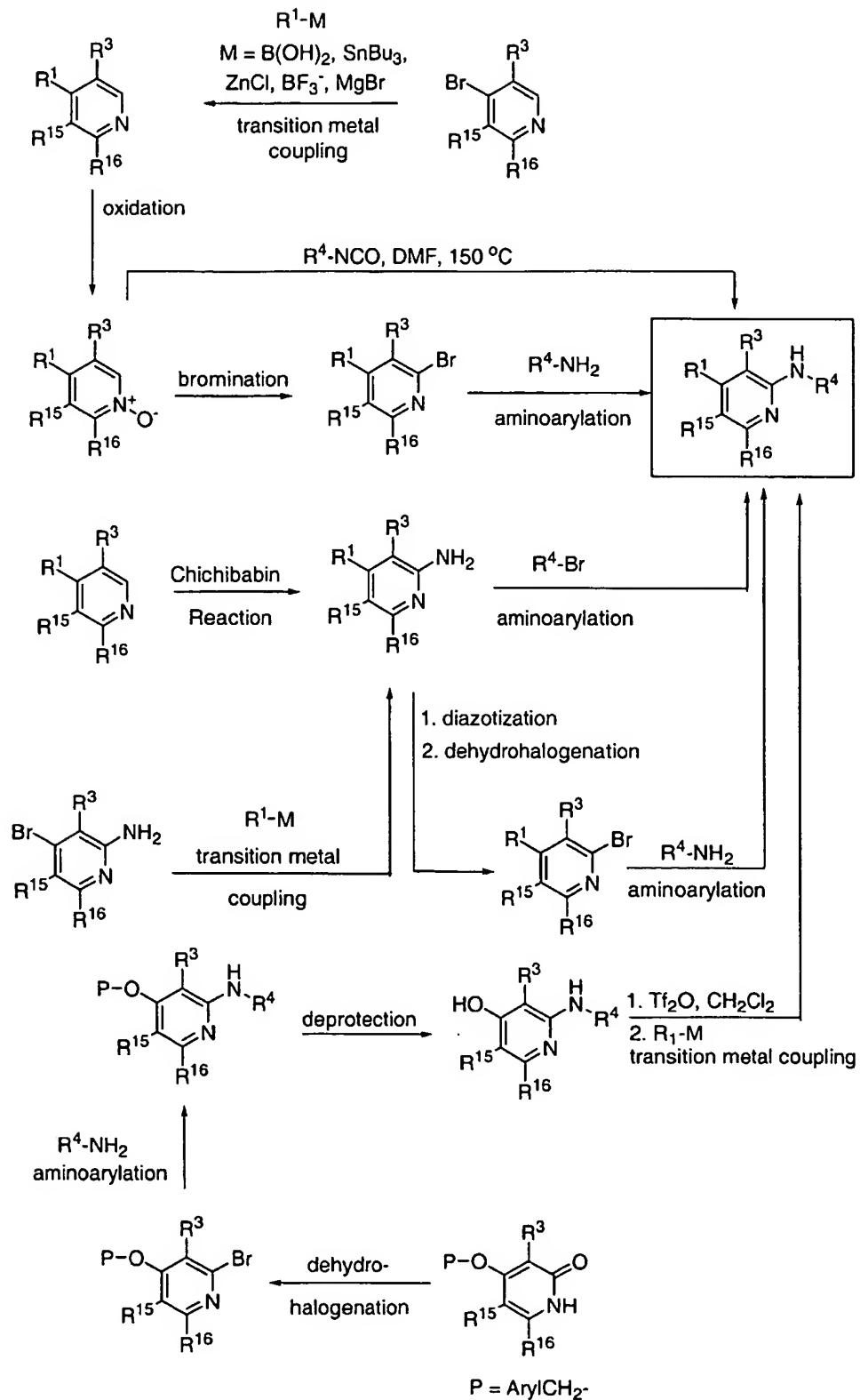
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in CH<sub>2</sub>Cl<sub>2</sub> (20 mL) and Et<sub>2</sub>O (150 mL). The organic solution was washed with 1 N HCl (3 x 75 mL), satd NaCl (50 mL), dried over MgSO<sub>4</sub>, filtered and concentrated to afford the title product as an off-white foam. MS (ESI, pos. ion) m/z: 338 (M+1).

5   **(b) N-(2H,3H-Benzo[3,4-e]1,4-dioxan-6-yl)-3-[4-(tert-butyl)phenyl]propanamide.** (2E)-N-(2H,3H-Benzo[3,4-e]1,4-dioxan-6-yl)-3-[4-(tert-butyl)phenyl]prop-2-enamide, **Example 109(a)**, (200 mg, 0.59 mmol) was dissolved in EtOH (25 mL), purged with N<sub>2</sub>, treated with 10% Pd on carbon (50 mg, Aldrich) then purged with H<sub>2</sub> and the suspension stirred at 25 °C, under 1  
10 atm H<sub>2</sub>, for 16 hr. The suspension was purged with N<sub>2</sub>, filtered through a pad of Celite, and concentrated *in vacuo* to a white foam. Purification by silica gel chromatography (45:45:10 hexane:CH<sub>2</sub>Cl<sub>2</sub>:EtOAc) provided the title product as a clear glass. MS (ESI, pos. ion) m/z: 340 (M+1).

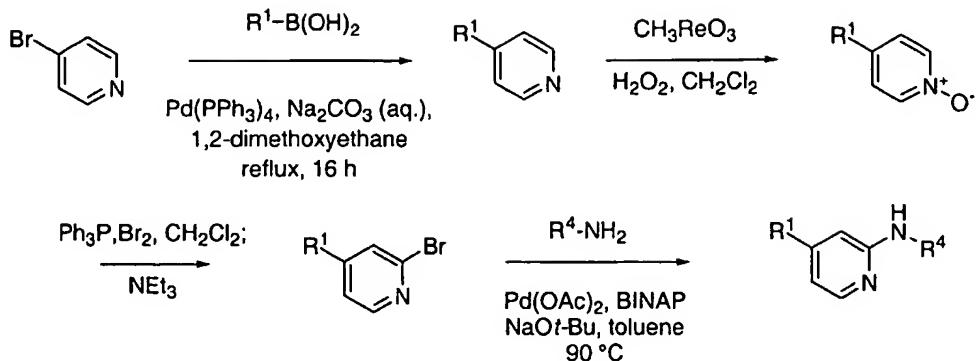
**General Scheme I**

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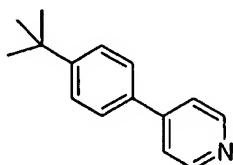


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**General Scheme II**

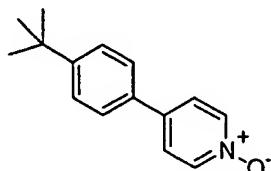


**Example 110**



5    (a) **4-[4-(*tert*-Butyl)phenyl]pyridine.**

To 4-bromopyridine hydrochloride (Aldrich) (8.9 g, 46 mmol) and tetrakis(triphenylphosphine)palladium(0) (Aldrich) (1.6 g, 1.4 mmol) was added 1,2-dimethoxyethane (250 mL) with stirring under nitrogen. After 20 min, a solution of Na<sub>2</sub>CO<sub>3</sub> (9.7 g in 70 mL of water) and 4-*tert*-butylbenzeneboronic acid (9.8 g, 55 mmol) were added sequentially to the mixture. The reaction was stirred at reflux overnight. The reaction mixture was concentrated in vacuo to approximately 1/3 its original volume, and the mixture was extracted with EtOAc (2 × 100 mL). The combined EtOAc layers were washed with brine, dried over Na<sub>2</sub>SO<sub>4</sub> and concentrated in vacuo. Purification by silica gel chromatography (1:5 EtOAc/hexanes) gave the title compound as a white solid. MS (ESI, pos. ion) m/z: 212 (M+1).

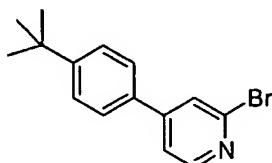


(b) **4-[4-(*tert*-Butyl)phenyl]pyridine 1-oxide.**

To the mixture of 4-[4-(*tert*-butyl)phenyl]pyridine (8.7 g, 41 mmol) and methyltrioxorhenium (VII) (Aldrich) (170 mg, 0.7 mmol) in a 100-mL round-

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bottomed flask was added CH<sub>2</sub>Cl<sub>2</sub> (18 mL). The mixture was then treated with 12 mL of hydrogen peroxide (Aldrich) dropwise. The reaction was stirred at room temperature under nitrogen overnight. Methylene chloride and brine were then added, and the aqueous layer was extracted with CH<sub>2</sub>Cl<sub>2</sub> (40 mL). The 5 organic layer was dried over Na<sub>2</sub>SO<sub>4</sub>, concentrated in vacuo to give the title compound as an off-white solid. MS (ESI, pos. ion) *m/z*: 228 (M+1).



**(c) 4-[4-(*tert*-Butyl)phenyl]-2-bromopyridine.**

To triphenylphosphine (Aldrich) (2.4 g, 9.1 mmol) dissolved in 10 mL of 10 CH<sub>2</sub>Cl<sub>2</sub> in a 50-mL round-bottomed flask was added bromine (Aldrich) (0.43 mL, 8.5 mmol). After stirring at 0°C for 10 min, 4-[4-(*tert*-butyl)phenyl]pyridine 1-oxide (1.5 g, 6.5 mmol) was added dropwise, followed by Et<sub>3</sub>N (1.2 mL, 8.5 mmol). The reaction mixture was stirred at 0°C for 1 h and then at room 15 temperature overnight. Methylene chloride and brine were added, and the aqueous layer was extracted with CH<sub>2</sub>Cl<sub>2</sub>. The organic layer was collected and dried over Na<sub>2</sub>SO<sub>4</sub>, filtered and concentrated in vacuo. Following purification by silica gel chromatography (10:1 hexane:EtOAc), the title compound was obtained as a pale yellow oil. MS (ESI, pos. ion) *m/z*: 293 (M+1).



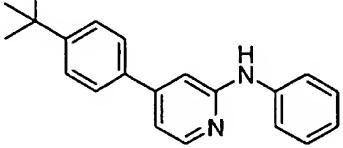
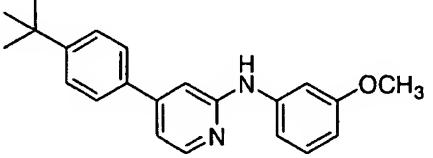
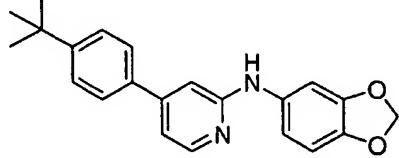
**20 (d) 2H,3H-Benz[e]1,4-dioxan-6-yl{4-[4-(*tert*-butyl)phenyl](2-pyridyl)}amine.**

To an oven-dried 50-mL round-bottomed flask were added 4-[4-(*tert*-butyl)phenyl]-2-bromopyridine (180 mg, 0.63 mmol) and 1,4-benzodioxan-6-amine (Aldrich) (191 mg, 1.3 mmol), followed by anhydrous toluene (60 mL) and 25 DMF (6 mL). Nitrogen was bubbled through the above solution via a needle for 1 h. Then palladium acetate (Aldrich) (21 mg, 0.01 mmol) and BINAP (Aldrich)

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(59 mg, 0.01 mmol) were introduced to the reaction followed by sodium *tert*-butoxide (Aldrich) (170 mg, 1.8 mmol). The reaction mixture was heated in a 90 C oil bath overnight. After cooling to room temperature, the reaction mixture was dissolved in ether, washed with brine, dried over Na<sub>2</sub>SO<sub>4</sub> and concentrated in vacuo. Following purification by silica gel chromatography (3:1 hexane:EtOAc), the title compound was obtained as a pale tan solid. MS (ESI, pos. ion) *m/z*: 361 (M+1). MP: 162-163°C.

**Table A.** The following compounds were prepared according to General Schemes I and II:

Example	Structure	MS (ESI, pos. ion) <i>m/z</i>	Melting Point °C
111		303 (M+1)	157
112		333 (M+1)	amorphous
113		347 (M+1)	156
114		331 (M+1)	133

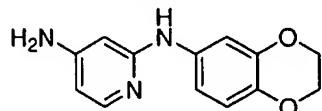
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Example	Structure	MS (ESI, pos. ion) <i>m/z</i>	Melting Point °C
115		393 (M+1)	amorphous
116		342 (M+1)	106
117		360 (M+1)	154
118		354 (M+1)	214
119		372 (M+1)	203
120		366 (M+1)	206
121		373 (M+1)	114

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Example	Structure	MS (ESI, pos. ion) <i>m/z</i>	Melting Point °C
122		383, 385 (M, M+2)	124
123		354 (M +1)	?

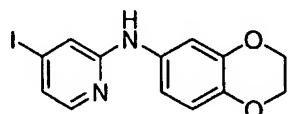
#### Example 124



##### (a) N2-(2,3-Dihydro-benzo[1,4]dioxin-6-yl)-pyridine-2,4-diamine.

5 In a 5-mL vial was added 4-amino-2-chloropyridine (Aldrich Chemical Company) (1.1 g, 8.7 mmol), 1,4-benzodioxane-6-amine (Aldrich Chemical Company) (5.3 g, 35 mmol) and copper (I) iodide (Aldrich Chemical Company) (0.17 g, 0.87 mmol). The content was sonicated at room temperature for 5min and then heated in the Smith Microwave Synthesizer at 200 °C for 10 min. The residue was purified by flash chromatography (95:5 dichloromethane:2N NH<sub>3</sub> in MeOH) to give the title compound as a dark solid. MS (ESI, pos. ion) *m/z*: 244 (M+1).

10



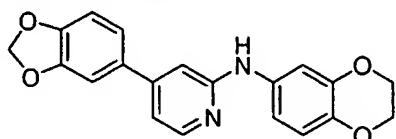
##### (b) (2,3-Dihydro-benzo[1,4]dioxin-6-yl)-(4-iodo-pyridin-2-yl)-amine.

Isopentyl nitrile (Aldrich Chemical Company) (3.9 mL, 29 mmol) was added to a mixture of N2-(2,3-dihydro-benzo[1,4]dioxin-6-yl)-pyridine-2,4-diamine (Example 2(a), 2.4 g, 9.8 mmol), potassium iodide (Aldrich Chemical Company) (1.6 g, 9.8 mmol), iodine (Aldrich Chemical Company) (1.2 g, 4.9 mmol) and copper (I) iodide (Aldrich Chemical Company) (1.9 g, 9.8 mmol) in 1,2-dimethoxyethane (60 mL). The reaction mixture was heated at 60-65 °C for 1hr.

15

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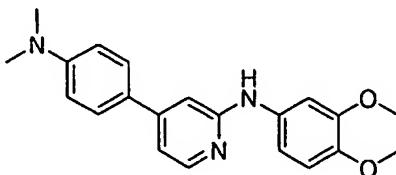
After cooling to room temperature, the insoluble materials were removed by filtration and the filtrate was diluted with EtOAc, washed with 25% aqueous NH<sub>4</sub>OH, 5% aqueous sodium bisulfite and then brine. The organic layer was separated, dried over Na<sub>2</sub>SO<sub>4</sub> and concentrated in vacuo. The residue was purified 5 on a Biotage 40 M column (2.5:1 hexane:EtOAc) to give the title compound as an off-white solid. MS (ESI, pos. ion) *m/z*: 355 (M+1).



**(c) (4-Benzodioxol-5-yl-pyridin-2-yl)-(2,3-dihydro-benzodioxin-6-yl)-amine.**

10 In a 5 mL vial were added (2,3-dihydro-benzodioxin-6-yl)-(4-iodo-pyridin-2-yl)-amine (Example 2(b), 75 mg, 0.2 mmol), tetrakis (triphenylphosphine) palladium (0) (Aldrich Chemical Company) (12 mg, 0.011 mmol) and 1,2-dimethoxyethane (2 mL). After stirring under nitrogen for 10 min, aqueous Na<sub>2</sub>CO<sub>3</sub> (22 mg in 0.5 mL of water) and 3,4-(methylenedioxy)phenylboronic acid 15 (Aldrich Chemical Company) (42 mg, 0.25 mmol) were introduced. The reaction was heated in the Smith Microwave Synthesizer at 150 °C for 10 min. The residue was partitioned between EtOAc and brine. The aqueous layer was extracted with EtOAc and the combined EtOAc layer was washed with brine, dried over Na<sub>2</sub>SO<sub>4</sub> and concentrated in vacuo. Purification on a Biotage 40 S column (4:1 20 hexane:EtOAc) gave the title compound as a light-yellow solid. MS (ESI, pos. ion) *m/z*: 349 (M+1). Mp: 116.0-118.0 °C.

#### Example 125



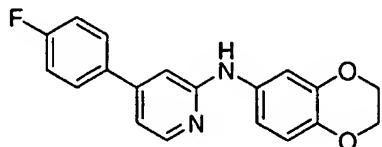
**(2,3-Dihydro-benzodioxin-6-yl)-[4-(4-dimethylamino-phenyl)-pyridin-2-yl]-amine.**

25 Following the same procedure described for Example 401(c), the mixture of (2,3-dihydro-benzodioxin-6-yl)-(4-iodo-pyridin-2-yl)-amine (Example 401(b),

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75 mg, 0.2 mmol), tetrakis (triphenylphosphine) palladium (0) (Aldrich Chemical Company) (12 mg, 0.011 mmol), N, N-dimethylaminobenzeneboronic acid (Aldrich Chemical Company) (41 mg, 0.25 mmol) and 1,2-dimethoxyethane (2 mL) gave, after heated in the Microwave Smith Synthesizer at 150 °C for 10 min and purification on a Biotage 40S column (1.5:1 hexane:EtOAc), the title compound as a tan solid. MS (ESI, pos. ion) *m/z*: 348 (M+1). Mp: 154.0-155.5 °C.

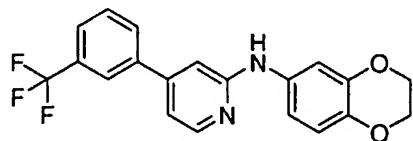
#### Example 126



**(2,3-Dihydro-benzo[1,4]dioxin-6-yl)-[4-(4-fluoro-phenyl)-pyridin-2-yl]-amine.**

Following the same procedure described for Example 401 (c), the mixture of (2,3-dihydro-benzo[1,4]dioxin-6-yl)-(4-iodo-pyridin-2-yl)-amine (Example 401 (b), 75 mg, 0.2 mmol), tetrakis (triphenylphosphine) palladium (0) (Aldrich Chemical Company) (12 mg, 0.011 mmol), 4-fluorobenzeneboronic acid (Avocado Chemical Company) (35 mg, 0.25 mmol) and 1,2-dimethoxyethane (2 mL) gave, after heated in the Microwave Smith Synthesizer at 150 °C for 10 min and purification on a Biotage 40S column (3:1 hexane:EtOAc), the title compound as an off-white solid. MS (ESI, pos. ion) *m/z*: 323 (M+1). Mp: 134.5-135.0 °C.

#### Example 127



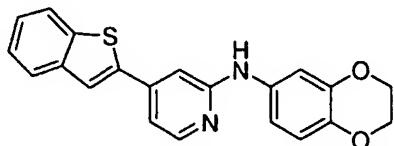
**(2,3-Dihydro-benzo[1,4]dioxin-6-yl)-[4-(3-trifluoromethyl-phenyl)-pyridin-2-yl]-amine.**

Following the same procedure described for Example 401(c), the mixture of (2,3-dihydro-benzo[1,4]dioxin-6-yl)-(4-iodo-pyridin-2-yl)-amine (Example 401 (b), 75 mg, 0.2 mmol), tetrakis (triphenylphosphine) palladium (0) (Aldrich Chemical Company) (12 mg, 0.011 mmol), 3-(trifluoromethyl)phenylboronic acid (Aldrich Chemical Company) (47 mg, 0.25 mmol) and 1,2-dimethoxyethane (2 mL) gave, after heated in the Microwave Smith Synthesizer at 150 °C for 10 min and

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purification on a Biotage 40S column (4:1 hexane:EtOAc), the title compound as a light-yellow solid. MS (ESI, pos. ion) *m/z*: 373 (M+1). Mp: 138.9-140.5 °C.

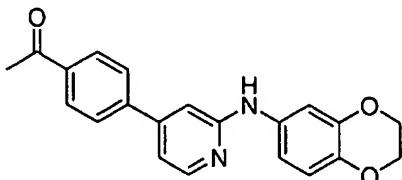
**Example 128**



5    **(4-Benzo[b]thiophen-2-yl-pyridin-2-yl)-(2,3-dihydro-benzo[1,4]dioxin-6-yl)-amine.**

Following the same procedure described for Example 401(c), the mixture of (2,3-dihydro-benzo[1,4]dioxin-6-yl)-(4-iodo-pyridin-2-yl)-amine (Example 401(b), 75 mg, 0.2 mmol), tetrakis (triphenylphosphine) palladium (0) (Aldrich Chemical Company) (12 mg, 0.011 mmol), benzothiophene-2-boronic acid (Frontier Scientific, Inc.) (45 mg, 0.25 mmol) and 1,2-dimethoxyethane (2 mL) gave, after heated in the Microwave Smith Synthesizer at 150 °C for 10 min and purification on a Biotage 40S column (4:1 hexane:EtOAc), the title compound as a light-yellow solid. MS (ESI, pos. ion) *m/z*: 361 (M+1). Mp: 154.0-154.1 °C.

15    **Example 129**

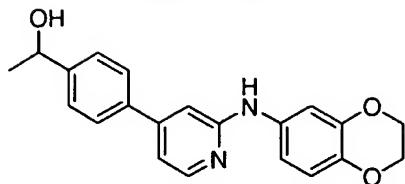


1-**{4-[2-(2,3-Dihydro-benzo[1,4]dioxin-6-ylamino)-pyridin-4-yl]-phenyl}-ethanone.**

Following the similar procedure described for Example 401(c), the mixture of (2,3-dihydro-benzo[1,4]dioxin-6-yl)-(4-iodo-pyridin-2-yl)-amine (Example 401(b), 0.73 g, 2.1 mmol), tetrakis (triphenylphosphine) palladium (0) (Aldrich Chemical Company) (0.12 g, 0.11 mmol), 4-acetylphenylboronic acid (Aldrich Chemical Company) (0.41 g, 2.5 mmol) and 1,2-dimethoxyethane (20 mL) gave, after heated at 90 °C overnight and purification on a Biotage 40M column (3:1 hexane:EtOAc), the title compound as a light-orange solid. MS (ESI, pos. ion) *m/z*: 347 (M+1). Mp: 178.0-180.5 °C.

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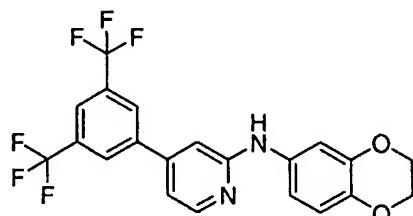
**Example 130**



**1-{4-[2-(2,3-Dihydro-benzo[1,4]dioxin-6-ylamino)-pyridin-4-yl]-phenyl}-ethanol.**

5 To the suspension of 1-{4-[2-(2,3-dihydro-benzo[1,4]dioxin-6-ylamino)-pyridin-4-yl]-phenyl}-ethanone (Example 7, 0.19 g, 0.55 mmol) in 2 mL of MeOH was added a solution of methylamine in MeOH (Aldrich Chemical Company) (2N, 0.55mL, 1.1 mmol). The reaction was stirred at room temperature under nitrogen overnight. NaBH<sub>4</sub> (Aldrich Chemical Company) (25 mg, 0.66 mmol) was then 10 added to the reaction and it was stirred for another 5 hrs. The solvent was evaporated the residue was purified on a Biotage 40M column (97:3 dichloromethane:2N NH<sub>3</sub> in MeOH) to give the title compound as an off-white foam. MS (ESI, pos. ion) *m/z*: 349 (M+1). Mp: 55.9- 61.5 °C.

**Example 131**



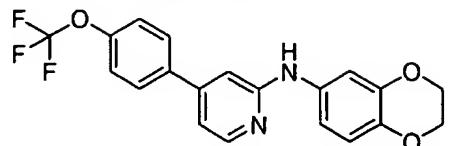
15 [4-(3,5-Bis-trifluoromethyl-phenyl)-pyridin-2-yl]-2,3-dihydro-benzo[1,4]-dioxin-6-yl-amine.

Following the same procedure described for Example 401 (c), the mixture of (2,3-dihydro-benzo[1,4]dioxin-6-yl)-(4-iodo-pyridin-2-yl)-amine (Example 401 (b), 20 75 mg, 0.2 mmol), tetrakis (triphenylphosphine) palladium (0) (Aldrich Chemical Company) (12 mg, 0.011 mmol), 3,5-bis(trifluoromethyl)phenylboronic acid (Aldrich Chemical Company) (64 mg, 0.25 mmol) and 1,2-dimethoxyethane (2 mL) gave, after heated in the Microwave Smith Synthesizer at 150 °C for 10 min and purification on a Biotage 40S column (4:1 hexane:EtOAc), the title

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compound as a light-yellow solid. MS (ESI, pos. ion) *m/z*: 441 (M+1). Mp: 130.0-131.5 °C.

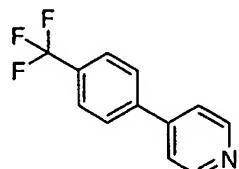
**Example 132**



5    **(2,3-Dihydro-benzo[1,4]dioxin-6-yl)-[4-(4-trifluoromethoxy-phenyl)-pyridin-2-yl]-amine.**

Following the same procedure described for Example 401 (c), the mixture of (2,3-dihydro-benzo[1,4]dioxin-6-yl)-(4-iodo-pyridin-2-yl)-amine (Example 401 (b), 75 mg, 0.2 mmol), tetrakis (triphenylphosphine) palladium (0) (Aldrich Chemical Company) (12 mg, 0.011 mmol), 4-(trifluoromethoxy)phenylboronic acid (Lancaster Synthesis Ltd.) (51 mg, 0.25 mmol) and 1,2-dimethoxyethane (2 mL) gave, after heated in the Microwave Smith Synthesizer at 150 °C for 10 min and purification on a Biotage 40S column (4:1 hexane:EtOAc), the title compound as an orange glass. MS (ESI, pos. ion) *m/z*: 389 (M+1).

15    **Example 133**

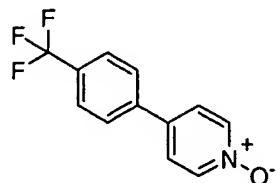


(a)    **4-(4-Trifluoromethyl-phenyl)-pyridine.**

In a 250-mL, round-bottomed flask were added 4-bromopyridine hydrochloride (Aldrich) (4.7 g, 24 mmol), tetrakis (triphenylphosphine) palladium (0) (Aldrich) (1.4 g, 1.2 mmol) and 1,2-dimethoxyethane (120 mL). After stirring under nitrogen for 10 min, a solution of Na<sub>2</sub>CO<sub>3</sub> (5.2 g in 30 mL of water) and 4-trifluoromethylbenzeneboronic acid (5.1 g, 27 mmol) were added sequentially to the mixture. The reaction was stirred in a 90 °C oil bath overnight. The 1,2-dimethoxyethane was evaporated in vacuo, and EtOAc was added to the residue. The aqueous layer was separated and extracted with EtOAc (2 x 50 mL). The combined EtOAc extracts were washed with brine, dried over Na<sub>2</sub>SO<sub>4</sub> and concentrated in vacuo. Purification by silica gel flash chromatography using 1:5

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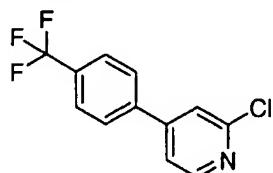
EtOAc/hexanes as eluent gave the title compound as a light-tan solid. MS (ESI, pos. ion)  $m/z$ : 224 (M+1).



**(b) 4-(4-Trifluoromethyl-phenyl)-pyridine 1-oxide.**

5 To a mixture of 4-(4-trifluoromethyl-phenyl)-pyridine (5.0 g, 22 mmol) and methyltrioxorhenium (VII) (Aldrich) (110 mg, 0.45 mmol) in a 100-mL, round-bottomed flask was added CH<sub>2</sub>Cl<sub>2</sub> (10 mL). Hydrogen peroxide (5 mL, Aldrich) was added drop-wise, and the reaction was stirred at room temperature under N<sub>2</sub> for 48 h. The mixture was partitioned between CH<sub>2</sub>Cl<sub>2</sub> and brine, and the aqueous layer was extracted with CH<sub>2</sub>Cl<sub>2</sub> (40 mL). The combined organic layers were dried over Na<sub>2</sub>SO<sub>4</sub>, filtered, and concentrated in vacuo to give the title compound as an off-white solid. MS (ESI, pos. ion)  $m/z$ : 240 (M+1).

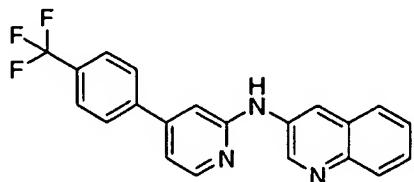
10



**(c) 2-Chloro-4-(4-trifluoromethyl-phenyl)-pyridine.**

15 To 4-(4-trifluoromethyl-phenyl)-pyridine 1-oxide (2.4 g, 10 mmol) was added phosphorous oxychloride (12 mL) at room temperature. The reaction mixture was heated at reflux for 5 h. POCl<sub>3</sub> was removed under reduced pressure, and the residue was partitioned between EtOAc and aqueous ammonium hydroxide. The aqueous layer was extracted with EtOAc and the combined organic layers were dried over Na<sub>2</sub>SO<sub>4</sub>, filtered, and concentrated in vacuo. The crude material was purified by chromatography on a Biotage 40 M column (8:1 hexanes: EtOAc) to give the title compound as a white solid. MS (ESI, pos. ion)  $m/z$ : 258.5 (M+1).

20

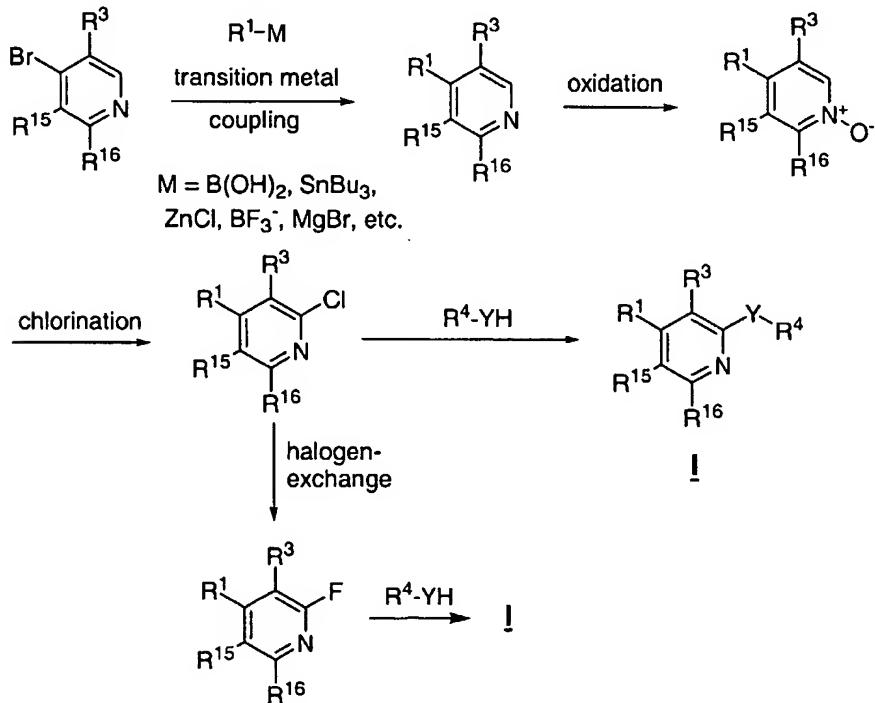


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**(d) Quinolin-3-yl- [4-(4-trifluoromethyl-phenyl)-pyridin-2-yl]-amine.**

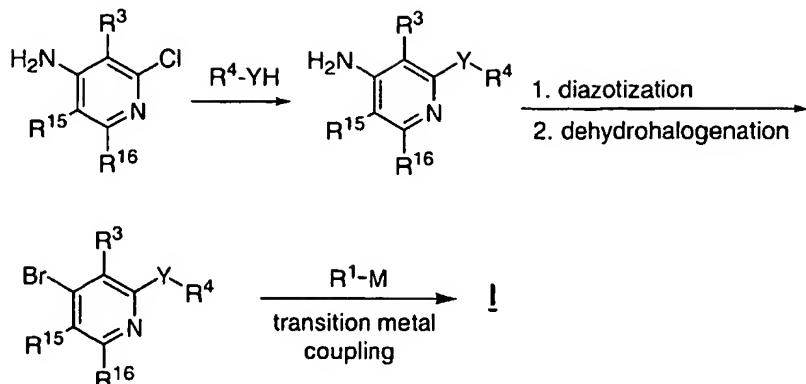
To an oven-dried 50 mL round-bottomed flask were added 2-chloro-4-(4-trifluoromethyl-phenyl)-pyridine (138 mg, 0.54 mmol) and 3-aminoquinoline (Aldrich Chemical Company) (93 mg, 0.64 mmol), followed by anhydrous toluene (45 mL). Nitrogen was bubbled through the above solution via a needle for 1h. Then palladium acetate (Aldrich Chemical Company) (18 mg, 0.08 mmol) and BINAP (Aldrich Chemical Company) (50 mg, 0.08 mmol) were added to the reaction in one portion, followed by sodium tert-butoxide (Aldrich Chemical Company) (145 mg, 1.5 mmol). The reaction mixture was heated at 90 °C overnight. After cooling to room temperature, the reaction mixture was taken up to ether, and washed with brine. The aqueous layer was extracted with ether (2x) and the combined ether layer was dried over Na<sub>2</sub>SO<sub>4</sub> and concentrated. The residue was purified on a Biotage 40 S column (2.5:1 hexane:EtOAc) to give the title compound as an off-white solid. MS (ESI, pos. ion) *m/z*: 366 (M+1). Mp: 15 207.4-207.5 °C.

**General Scheme III.a**

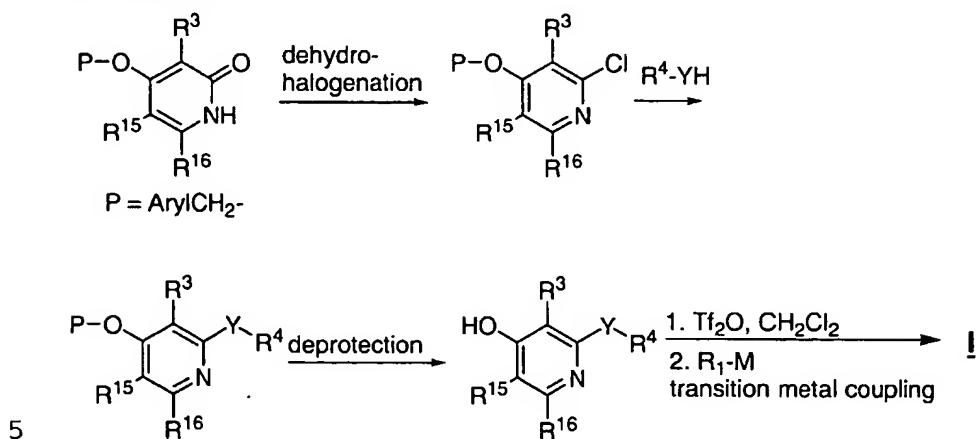


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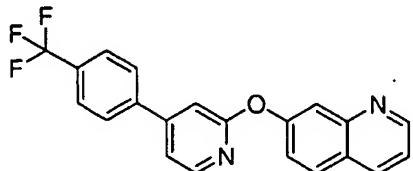
**Scheme III.b**



**Scheme III.c**



**Example 134**



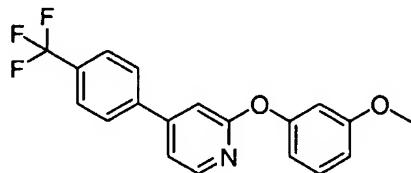
**7-[4-(4-Trifluoromethyl-phenyl)-pyridin-2-yloxy]-quinoline.**

10 To an oven-dried, 50-mL, round-bottomed flask were added 7-hydroxyquinoline (Aldrich) (87 mg, 0.6 mmol) and DMF (1 mL). The solution was place under nitrogen, and NaH (24 mg, 0.6 mmol) was added in one portion. After stirring for 10 min, 2-chloro-4-(4-trifluoromethylphenyl) pyridine (Example 410 (c), 129 mg, 0.5 mmol) was added. The reaction mixture was heated in a 155 °C oil bath for

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72 h. After cooling to room temperature, the reaction mixture was partitioned between EtOAc and brine. The aqueous layer was extracted with EtOAc and the combined organic layers were dried over Na<sub>2</sub>SO<sub>4</sub>, concentrated in vacuo. The crude material was purified on a Biotage 40 S column (3:1 hexanes: EtOAc) to give the title compound as an off-white solid. MS (ESI, pos. ion) *m/z*: 367 (M+1). Mp: 156.5-158.5 °C.

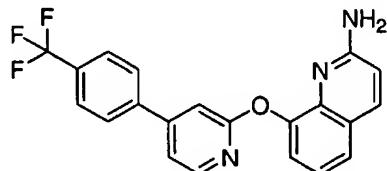
#### Example 135



#### 2-(3-Methoxy-phenoxy)-4-(4-trifluoromethyl-phenyl)-pyridine.

This material was prepared according to the method described in Example 2 (d) using 2-chloro-4- (4-trifluoromethyl-phenyl)-pyridine (Example 410 (c), 129 mg, 0.5 mmol), 3-methoxyphenol (66 uL, 0.6 mmol), and sodium hydride (24 mg, 0.6 mmol) in DMF (1 mL). Purification on a Biotage 40S column (8:1 hexanes: EtOAc), provided the title compound as a white solid. MS (ESI, pos. ion) *m/z*: 346 (M+1). Mp: 77.5- 79.6 °C.

#### Example 136



#### 8-[4-(4-Trifluoromethyl-phenyl)-pyridin-2-yloxy]-quinolin-2-ylamine.

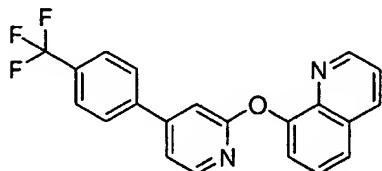
A mixture of 2-azido-quinolin-8-ol (0.28 g, 1.5 mmol), 2-chloro-4- (4-trifluoromethyl-phenyl)-pyridine (Example 410 (c), 0.26 g, 1 mmol), and sodium hydride (64 mg, 1.6 mmol) in DMF (2 mL) was heated in a 180 °C oil bath for 48 h. The reaction mixture was then transferred to a 5-mL tube, and irradiated in the Microwave Smith Synthesizer at 250 °C for 10 min. EtOAc and brine were added, and the aqueous layer was extracted with EtOAc. Combined organic layers were dried over Na<sub>2</sub>SO<sub>4</sub>, filtered, and concentrated in vacuo. The compound was purified on a Biotage 40S column (98:2 dichloromethane: MeOH)

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followed by recrystallization from EtOAc/hexanes to give the title compound as a light-yellow shiny crystal. MS (ESI, pos. ion)  $m/z$ : 382 (M+1). Mp: 196.5-199.5 °C. Anal. Calcd for  $C_{21}H_{14}F_3N_3O$ : C, 66.14; H, 3.70; N, 11.02. Found: C, 66.18; H, 3.69; N, 11.08.

5

### Example 137

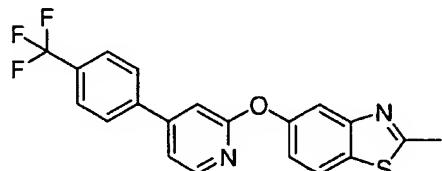


**8-[4-(4-Trifluoromethyl-phenyl)-pyridin-2-yloxy]-quinoline.**

This material was prepared according to the method described in Example 413 using 2-chloro-4- (4-trifluoromethyl-phenyl)-pyridine (Example 410 (c), 0.16 g, 10 0.6 mmol), 8-hydroxyquinoline (0.1 g, 0.7 mmol), sodium hydride (38 mg, 1.0 mmol) and copper (I) iodide (12 mg, 0.06 mmol) in DMF (3 mL). Purification on a Biotage 40S column (3:1 hexanes: EtOAc), provided the title compound as a white solid. MS (ESI, pos. ion)  $m/z$ : 367 (M+1). Anal. Calcd for  $C_{21}H_{13}F_3N_2O$ : C, 68.85; H, 3.58; N, 7.65. Found: C, 68.88; H, 3.59; N, 7.51.

15

### Example 138



**2-Methyl-5-[4-(4-trifluoromethyl-phenyl)-pyridin-2-yloxy]-benzothiazole.**

This material was prepared according to the method described in Example 413 using 2-chloro-4- (4-trifluoromethyl-phenyl)-pyridine (Example 410 (c), 0.16 g, 20 0.6 mmol), 2-methyl-5-benzothiazolol (0.12 g, 0.7 mmol), sodium hydride (38 mg, 1.0 mmol) and copper (I) iodide (12 mg, 0.06 mmol) in DMF (3 mL). Purification on a Biotage 40S column (3:1 hexanes: EtOAc), provided the title compound as a white solid. MS (ESI, pos. ion)  $m/z$ : 367 (M+1). Mp: 160.5-163.5 °C. Anal. Calcd for  $C_{20}H_{13}F_3N_2OS$ . 0.25 H<sub>2</sub>O: C, 61.45; H, 3.48; N, 7.17; S, 8.20. 25 Found: C, 61.45; H, 3.39; N, 7.17; S, 8.31.

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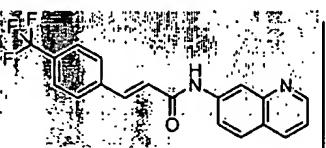
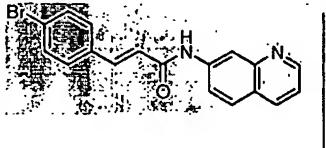
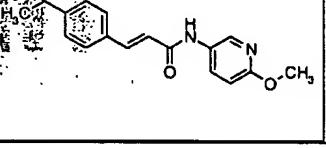
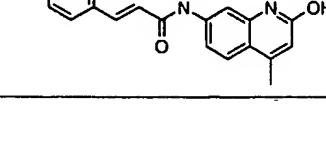
**Table B.** The following compounds were prepared according to General Schemes III.a, III.b and III.c:

Example	Structure	MS (ESI, pos. ion) <i>m/z</i>	Melting Point °C
139		388 (M+1)	246.3- 247.5
140		428 (M-1) 430 (M+1)	

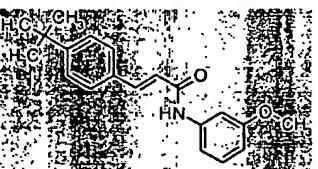
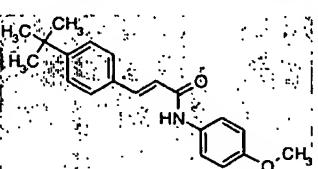
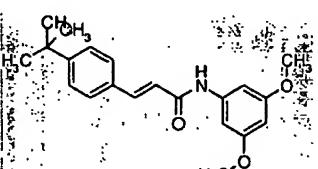
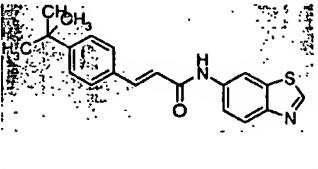
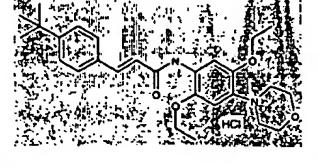
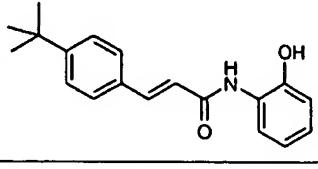
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### Additional Examples

Following the procedures described above, or with slight modifications thereof, and following procedures familiar to one of ordinary skill in the art, the following examples were prepared from commercially available reagents:

Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) <i>m/z</i>
142		244	343 (M+1)
143		231	352, 354 (M, M+2)
144		159	311 (M+1)
145		>300	361 (M+1)

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Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) <i>m/z</i>
146		59-61	310 (M+1)
147		174-175	310 (M+1)
148		97-102	340 (M+1)
149		148-152	337 (M+1)
150		233-237	453 (M+1)
151		oil	296 (M+1)

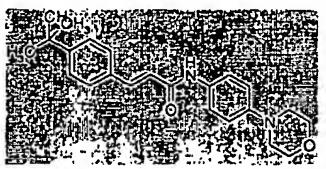
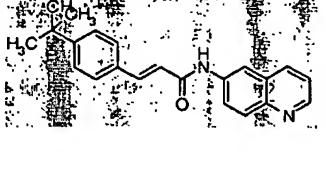
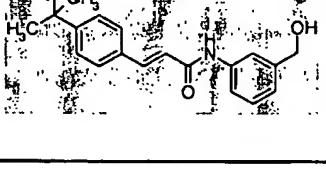
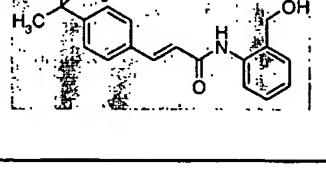
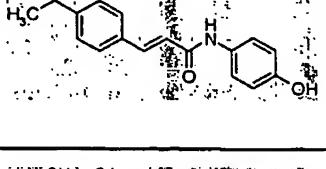
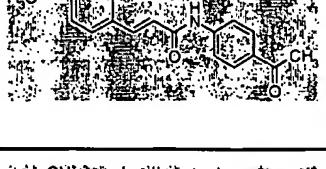
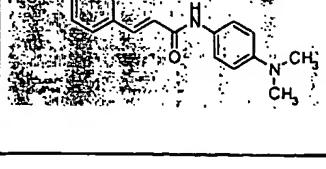
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Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) <i>m/z</i>
152		106-108	281 (M+1)
153		98-102	295 (M+1)
154		171-173	323 (M+1)
155		257	320 (M+1)
156		187-190	359 (M+1)
157		203	339 (M+1)
158		244-248	416 (M+1)

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Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) <i>m/z</i>
159		204	325 (M+1)
160		191	341 (M+1)
161		thin film	319 (M+1)
162		173	326 (M+1)
163		152	406 (M+1)
164		193	370 (M+1)

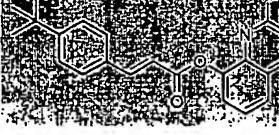
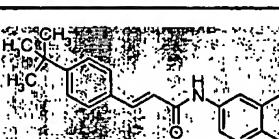
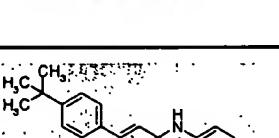
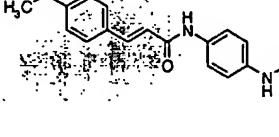
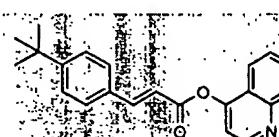
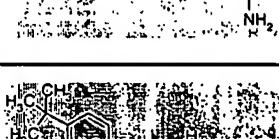
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Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) $m/z$
165		249	365 (M+1)
166		193	331 (M+1)
167		149	310 (M+1)
168		173	310 (M+1)
169		218	296 (M+1)
170		195	322 (M+1)
171		223	323 (M+1)

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Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) <i>m/z</i>
172		168	310 (M+1)
173		205	348 (M+1)
174		161	338 (M+1)
175		212	334 (M+1)
176		263	323 (M+1)
177		239	331 (M+1)

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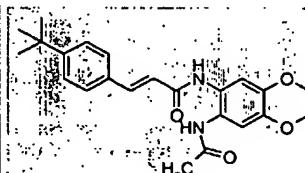
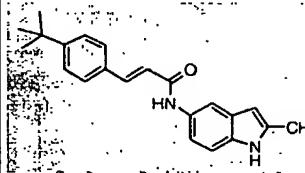
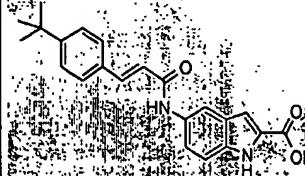
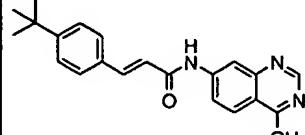
Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) m/z
178		167	347 (M+1)
179		172	330 (M+1)
180		154	336 (M+1)
181		281	337 (M+1)
182		154	347 (M+1)
183		105	328 (M+1)
184		165	329 (M-1)

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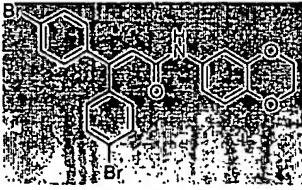
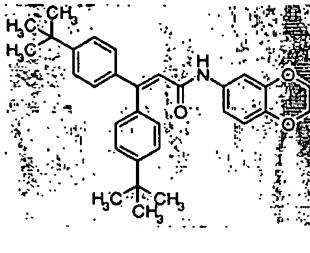
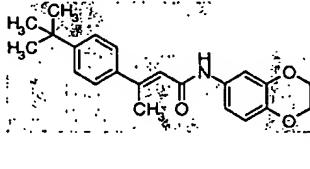
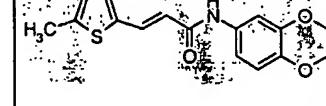
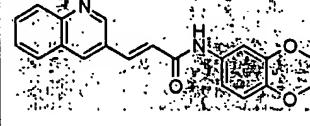
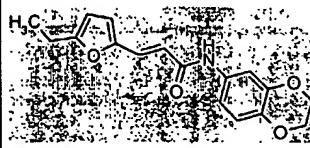
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185		270	331 (M+1)
186		68	331 (M+1)

Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) m/z
187		261	320 (M+1)
188		277	321 (M+1)
189		194	319 (M+1)
190		101	319 (M+1)

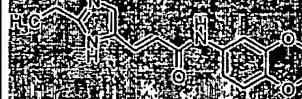
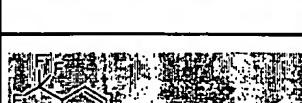
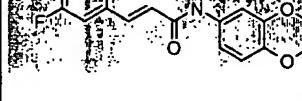
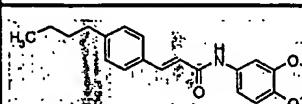
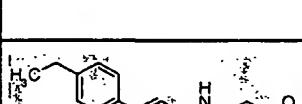
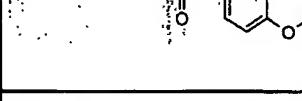
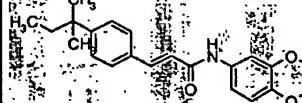
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Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) m/z
200		258	336 (M+1)
201		178	352 (M+1)
202		196	395 (M+1)
203		222	333 (M+1)
204		218	391 (M+1)
205		296-298	348 (M+1)

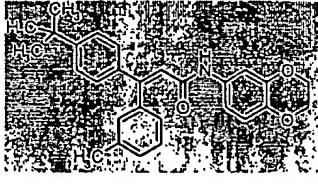
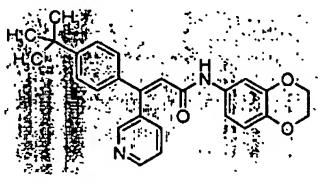
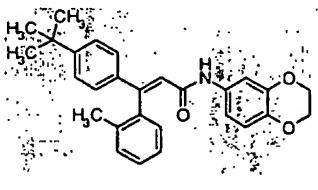
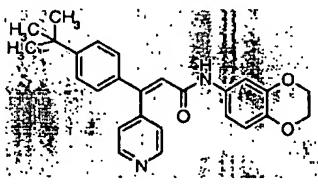
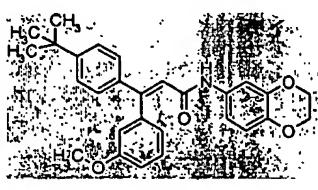
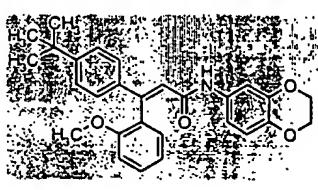
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Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) <i>m/z</i>
206		189	515 (M)
207		116-119	470 (M+1)
208		186	352 (M+1)
209		162-163	302 (M+1)
210		231-232	333 (M+1)
211		42-48	300 (M+1)

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Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) m/z
212		229-230	300 (M+1)
213		200-202	368 (M+1)
214		120	338 (M+1)
215		119	310 (M+1)
216		69	352 (M+1)
217		amorphous glass	351 (M+1)
218		84-90	338 (M+1)

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Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) <i>m/z</i>
219		64-71	428 (M+1)
220		100-104	415 (M+1)
221		91-93	428 (M+1)
222		205-206	415 (M+1)
223		78-80	444 (M+1)
224		89-93	444 (M+1)

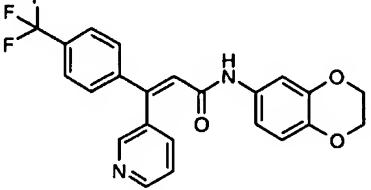
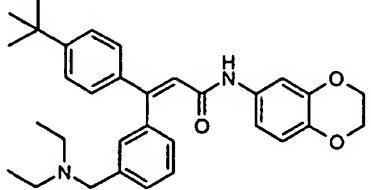
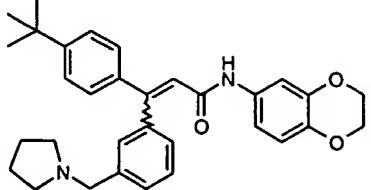
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Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) <i>m/z</i>
225		148-150	444 (M+1)
226		92-94	445 (M+1)
227		177-180	396 (M+1)
228		138-141	428 (M+1)
229		155	448 (M+1)

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Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) <i>m/z</i>
230		168	432 (M+1)
231		121-124	426 (M+1)
232			403 (M+1)
233		87	513 (M+1)
234			415 (M+1)

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Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) <i>m/z</i>
235		amorphous	427 (M+1)
236		56	499 (M+1)
237			497 (M+1)

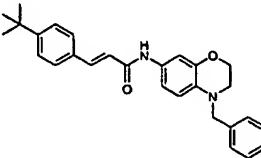
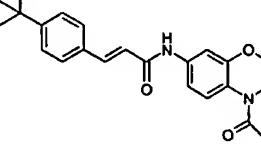
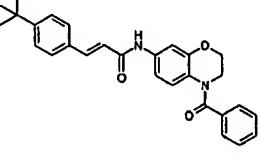
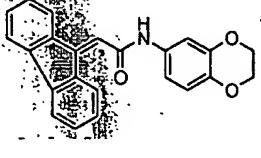
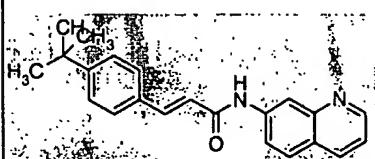
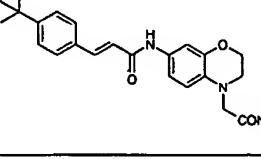
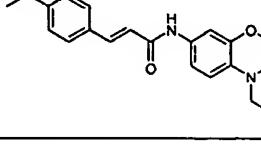
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Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) <i>m/z</i>
238		207-208	395 (M+1)
239		188-189	423 (M+1)
240		198-199	380 (M+1)
241		201-203	394 (M+1)
242		171-173	381 (M+1)
243		118-120	422 (M+1)

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Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) <i>m/z</i>
244		101-103	408 (M+1)
245		126-128	408 (M+1)
246		185-186	394 (M+1)
247		182-184	423 (M+1)
248		194-196	381 (M+1)
249		206-208	394 (M+1)

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Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) <i>m/z</i>
250		200-201	427 (M+1)
251		199-200	379 (M+1)
252		236-237	441 (M+1)
253		169	356 (M+1)
254		256-258	331 (M+1)
255		264-266	394 (M+1)
256		102-103	365 (M+1)

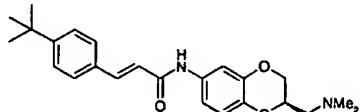
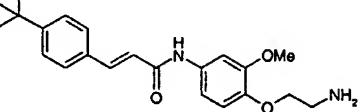
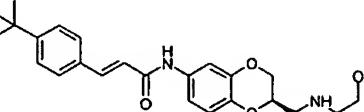
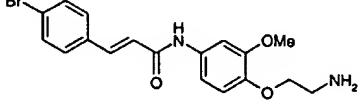
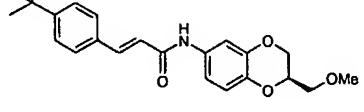
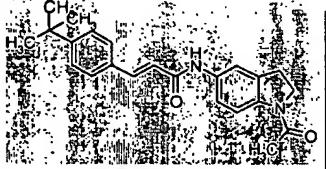
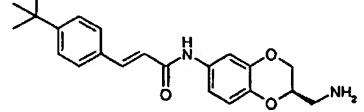
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Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) <i>m/z</i>
257		137-138	391 (M+1)
258		198-200	391 (M+1)
259		171-173	402 (M+1)
260		158-160	409 (M+1)
261		168-170	365 (M+1)
262		179-180	395 (M+1)
263		117-119	411 (M+1)

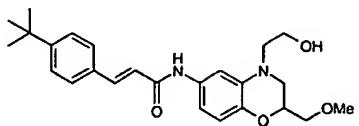
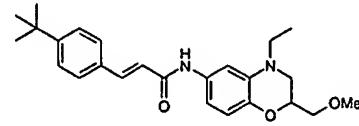
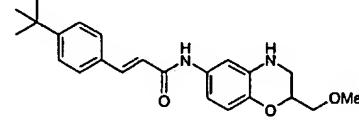
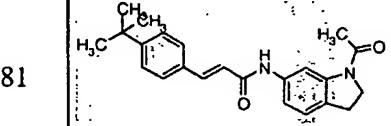
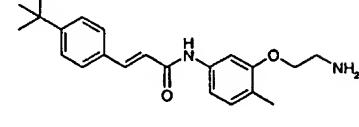
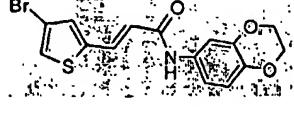
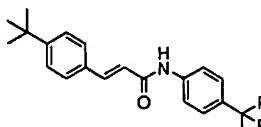
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Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) <i>m/z</i>
264		187-189	388 (M+1)
265		154-157	402 (M+1)
266		160-161	395 (M+1)
267		152-153	422 (M+1)
268		186-188	364 (M+1)
269		134-135	409 (M+1)
270		182-185	381 (M+1)

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Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) <i>m/z</i>
271		171-173	395 (M+1)
272		101-105	369 (M+1)
273		176-178	411 (M+1)
274		196-199	392 (M+1)
275		146-148	382 (M+1)
276		231	363 (M+1)
277		161-162	367 (M+1)

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Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) <i>m/z</i>
278		108-110	425 (M+1)
279		186-187	409 (M+1)
280		160-162	381 (M+1)
281		181	363 (M+1)
282		amorphous	353 (M+1)
283		(oil)	366 (M)
284			348 (M+1)

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Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) <i>m/z</i>
285			324 (M+1)
286			330 (M+1)
287			382 (M+1)
288			294 (M+1)
289			314 (M+1)
290			294 (M+1)
291			308 (M+1)

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Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) <i>m/z</i>
292			314 (M+1)
293			294 (M+1)
294			367 (M+1)
295		246-247	341 (M)
296			328 (M+1)
297		233-235	341 (M)
298			365 (M+1)

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Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) <i>m/z</i>
299			362 (M+1)
300			376 (M)
301			372 (M+1)
302		186-187	391 (M+1)
303		224-226	414 (M+1)
304		231-232	331 (M+1)
305		219-220	349 (M+1)

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Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) <i>m/z</i>
306		231-232	383 (M+1)
307		203-204	365 (M+1)
308		177-179	365 (M+1)
309		226-227	384 (M+1)
310		Amorphous	308 (M+1)
311		150	360 (M)
312		211	427 (M+1)

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Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) m/z
313		78	433 (M+1)
314		286	350 (M+1)
315		Amorphous	434 (M+1)
316		226	415 (M+1)
317		219	530 (M+1)
318		Amorphous	320 (M+1)
319		Amorphous	415 (M+1)

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Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) <i>m/z</i>
320		211	349 (M+1)
321		Amorphous	375 (M+1)
322		Amorphous	341 (M+1)
323		Amorphous	427 (M+1)
324		225	360 (M+1)
325		Amorphous	338 (M+1)
326		275	320 (M+1)

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Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) <i>m/z</i>
341		237-240	427 (M+1)
342		276-278	463 (M+1)
343		amorphous	423 (M+1)
344		202-204	476 (M+1)
345		214-218	451 (M+1)
346		amorphous	447 (M+1)
347		201-205	423 (M+1)

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Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) <i>m/z</i>
348		263-269	449 (M+1)
349		273-275	451 (M+1)
350			348 (M+1)
351			295 (M+1)
352		amorphous	417 (M+1)
353			308 (M+1)
354			328 (M+1)

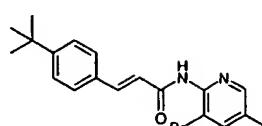
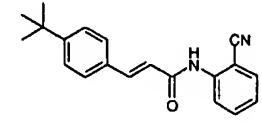
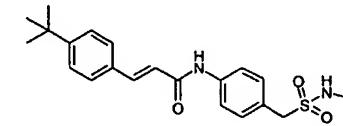
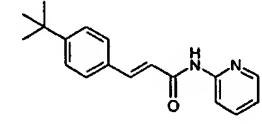
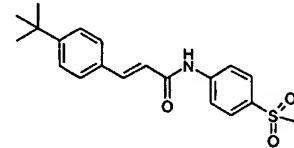
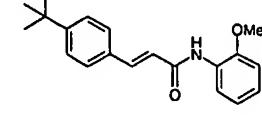
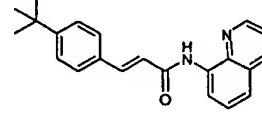
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Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) m/z
355		amorphous	435 (M+1)
356			319 (M+1)
357			323 (M+1)
358			323 (M+1)
359			334 (M+1)
360			320 (M+1)
361			324 (M+1)

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Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) <i>m/z</i>
362			294 (M+1)
363			298 (M+1)
364			385 (M+1)
365			359 (M+1)
366			328 (M+1)
367			325 (M+1)
368			315 (M+1)

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Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) <i>m/z</i>
369			374 (M+1)
370			305 (M+1)
371			387 (M+1)
372			281 (M+1)
373			358 (M+1)
374			310 (M+1)
375			331 (M+1)

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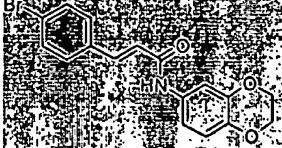
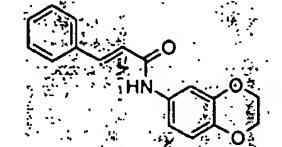
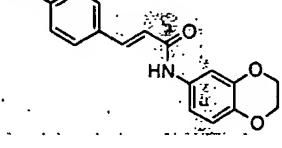
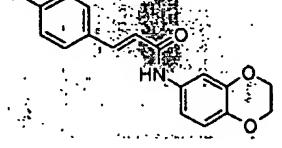
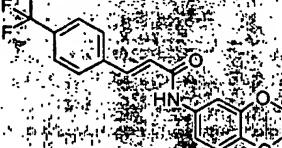
Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) <i>m/z</i>
376			282 (M+1)
377			315 (M+1)
378			360 (M+1)
379			344 (M+1)
380		amorphous	449 (M+1)
381		amorphous	401 (M+1)
382			350 (M+1)

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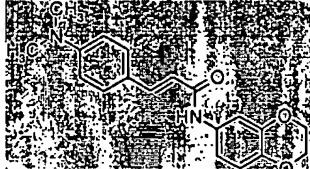
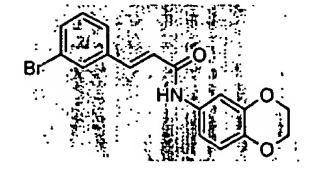
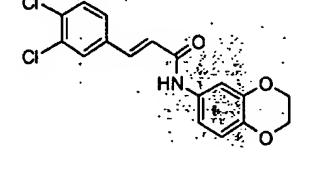
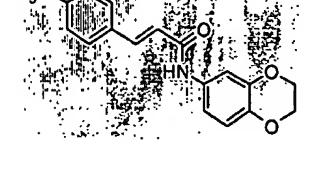
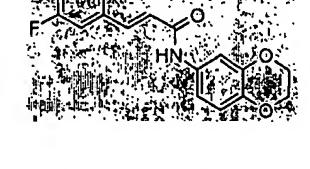
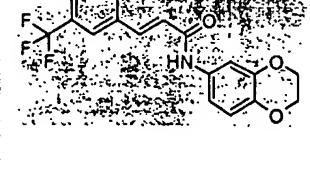
Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) m/z
383			351 (M+1)
384			345 (M+1)
385			344 (M+1)
386			339 (M+1)

Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) m/z
387		247-248	327 (M+1)
388		179-180	312 (M+1)

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Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) m/z
389		179-182	360, 362 (M, M+2)
390		182-183	282 (M+1)
391		187-188	316 (M+1)
392		195-196	300 (M+1)
393		201-202	350 (M+1)

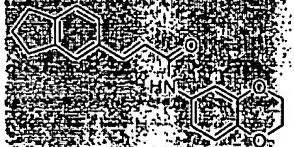
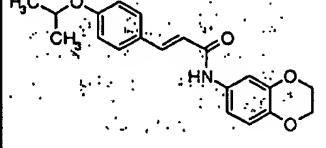
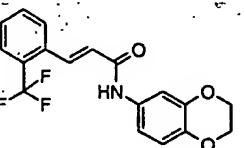
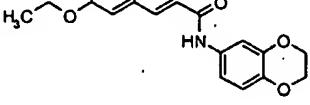
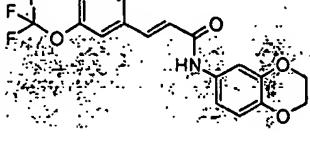
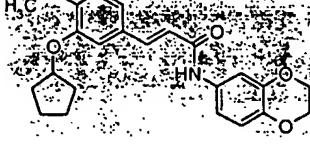
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Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) <i>m/z</i>
394		214-216	325 (M+1)
395		150	360 (M+1)
396		184-189	350 (M+1)
397		173-175	296 (M+1)
398		160-165	318 (M+1)
399		200	350 (M+1)

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Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) <i>m/z</i>
400		203-207	332 (M+1)
401		155-158	326 (M+1)
402		181-182	318 (M+1)
403		196	408 (M+1)
404		185-186	332 (M+1)

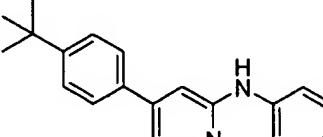
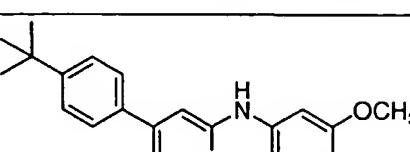
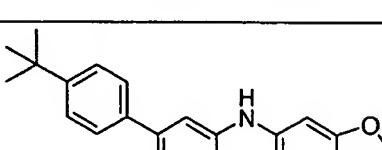
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Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) <i>m/z</i>
405		(oil)	322 (M+1)
406		188	340 (M+1)
407		176	350 (M+1)
408		(oil)	326 (M+1)
409		129	366 (M+1)
410		202	396 (M+1)

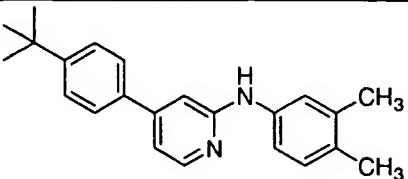
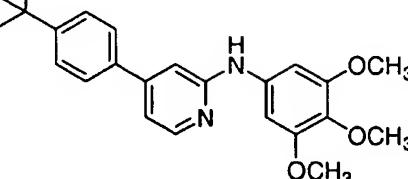
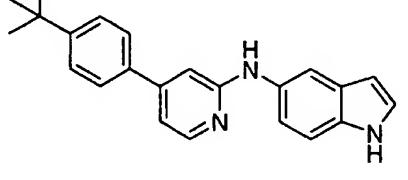
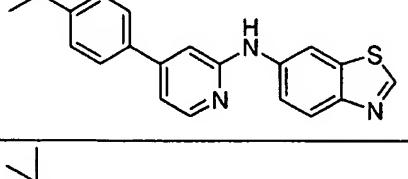
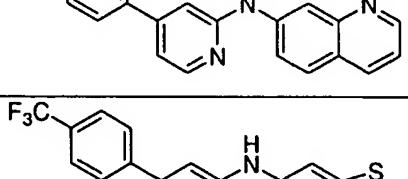
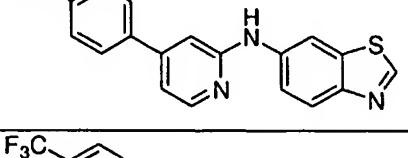
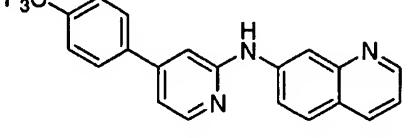
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Example number	Structure	Melting Point (°C)	Mass Spec. (ESI) m/z
411		191	362 (M+1)
412		165	324 (M+1)

**Table.** The following compounds were prepared according to General Schemes I, II or III:

Example number	Structure	MS (ESI, pos. ion) <i>m/z</i>	Melting Point °C
413		303 (M+1)	157
414		333 (M+1)	amorphous
415		347 (M+1)	156

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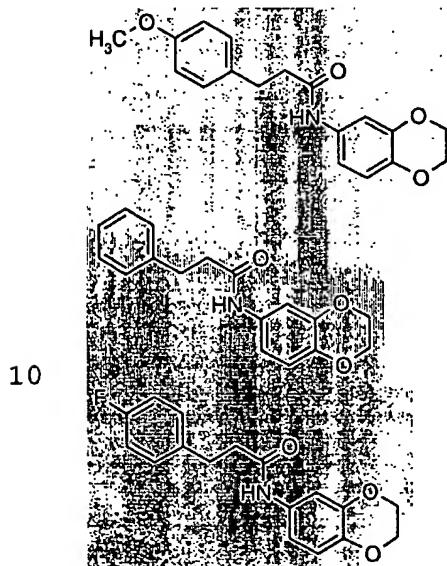
Example number	Structure	MS (ESI, pos. ion) <i>m/z</i>	Melting Point °C
416		331 (M+1)	133
417		393 (M+1)	amorphous
418		342 (M+1)	106
419		360 (M+1)	154
420		354 (M+1)	214
421		372 (M+1)	203
422		366 (M+1)	206

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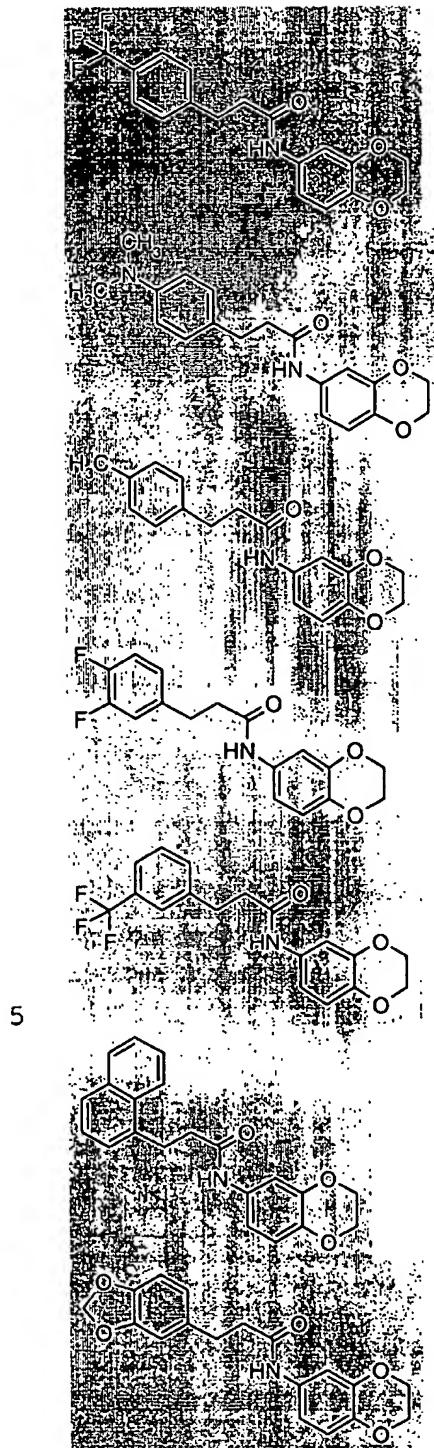
Example number	Structure	MS (ESI, pos. ion) m/z	Melting Point °C
423		373 (M+1)	114
424		383, 385 (M, M+2)	124

### Additional Examples

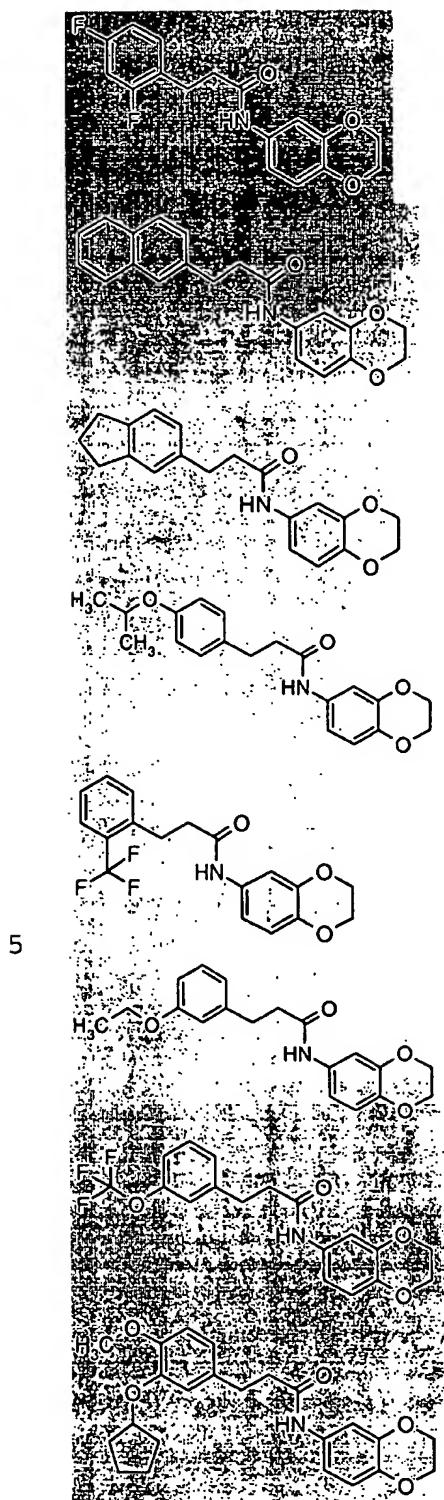
Following the procedures described above, and applying the procedure in Example 109 to the cinnamides exemplified, or with slight modifications thereof,  
 5 and following procedures familiar to one of ordinary skill in the art, the following examples may be prepared from commercially available reagents:



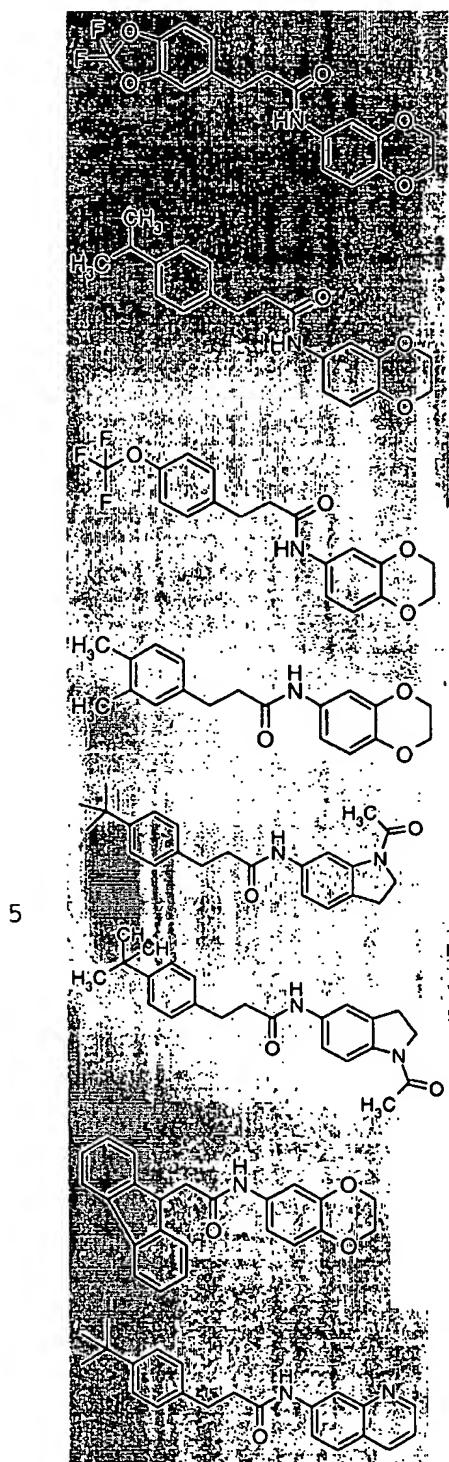
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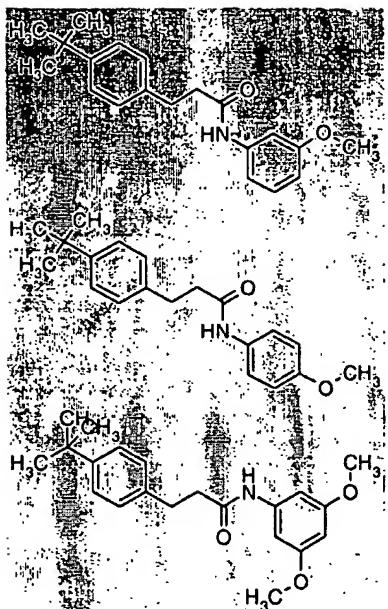
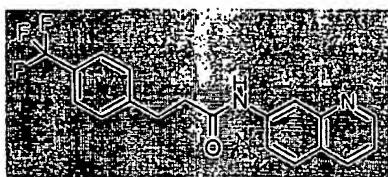
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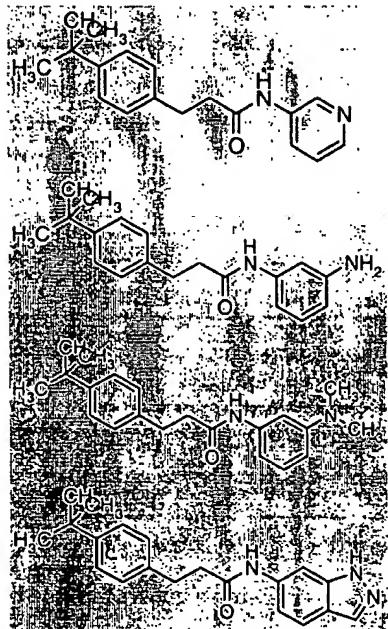
- 371 -



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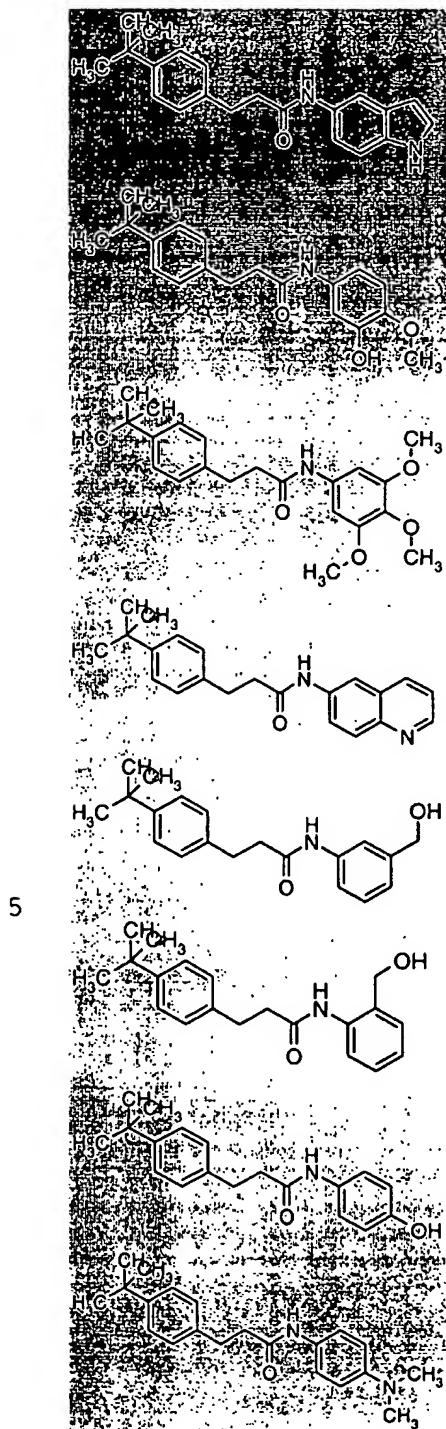


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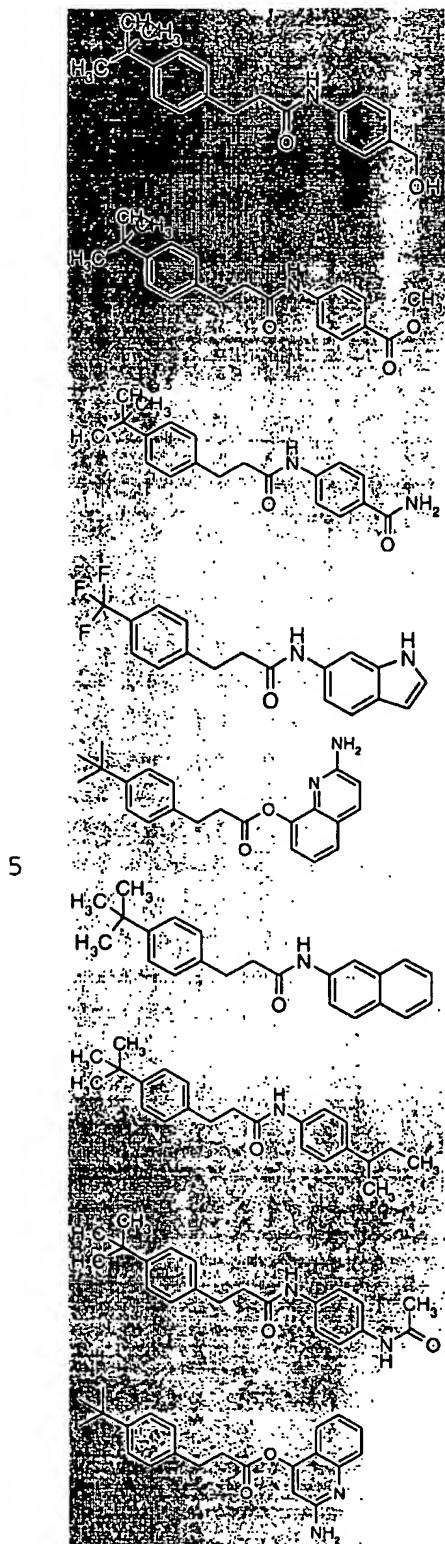


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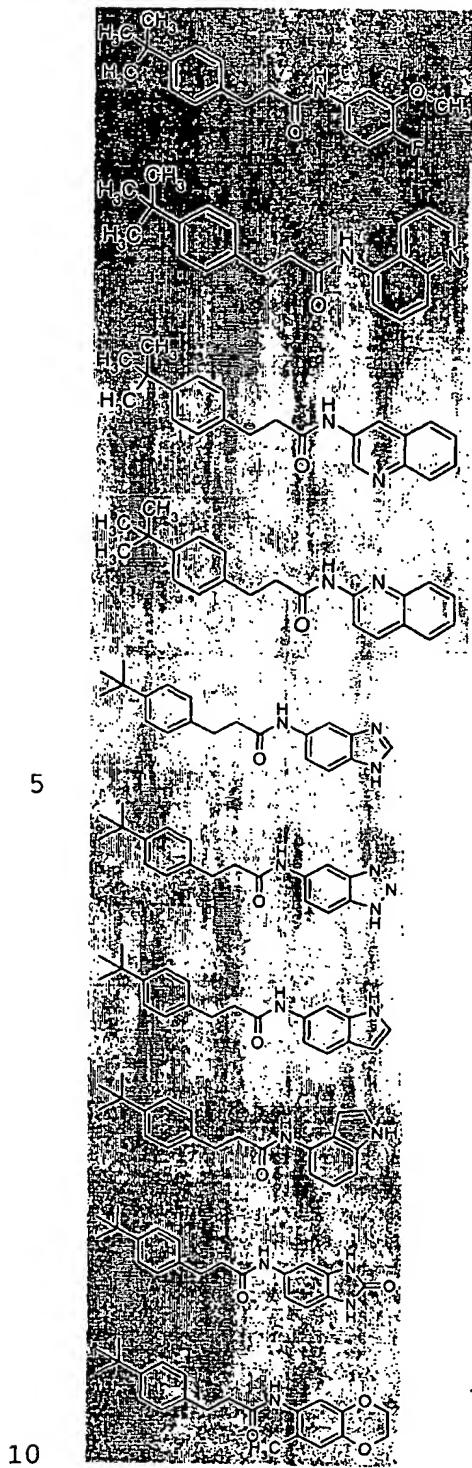
- 373 -



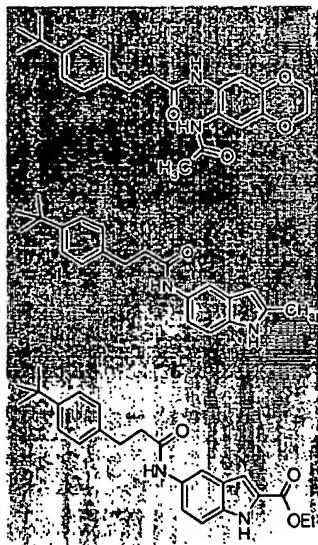
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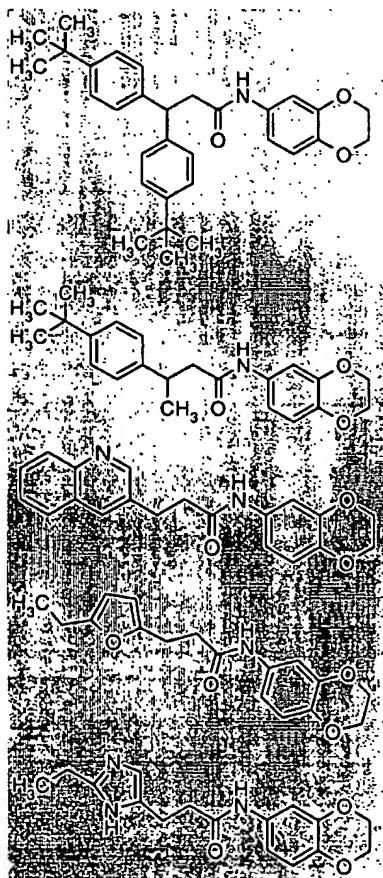
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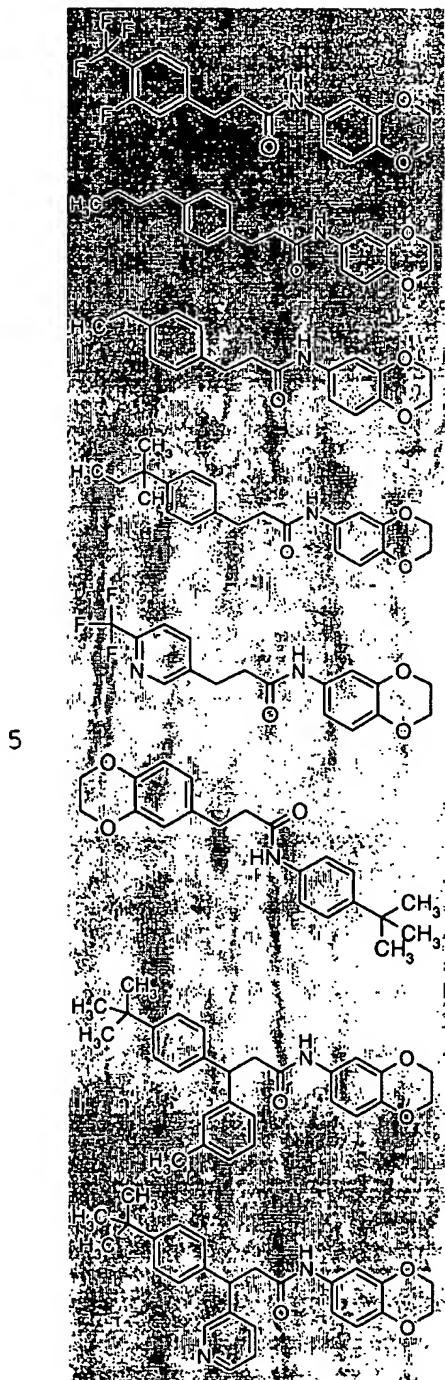


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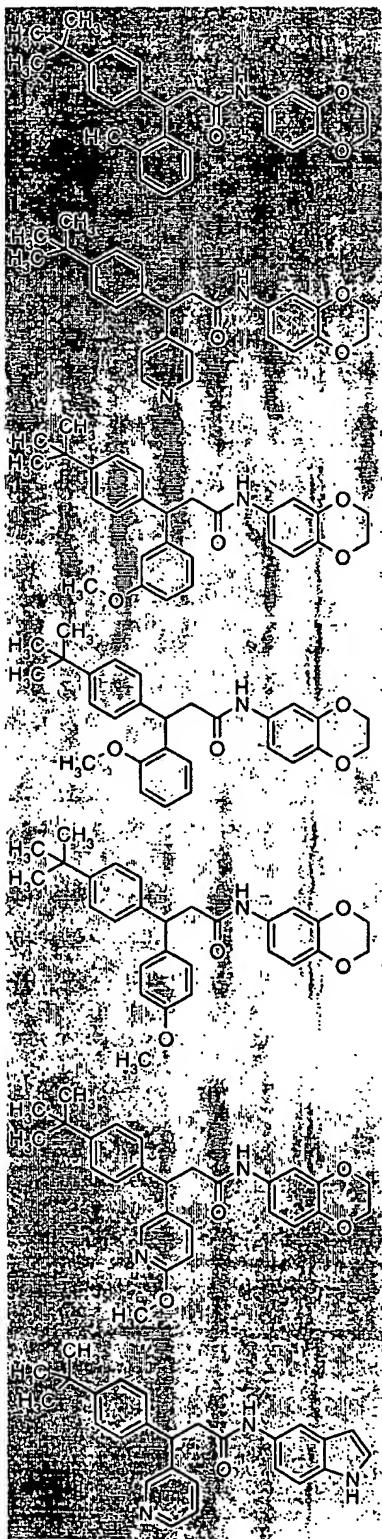
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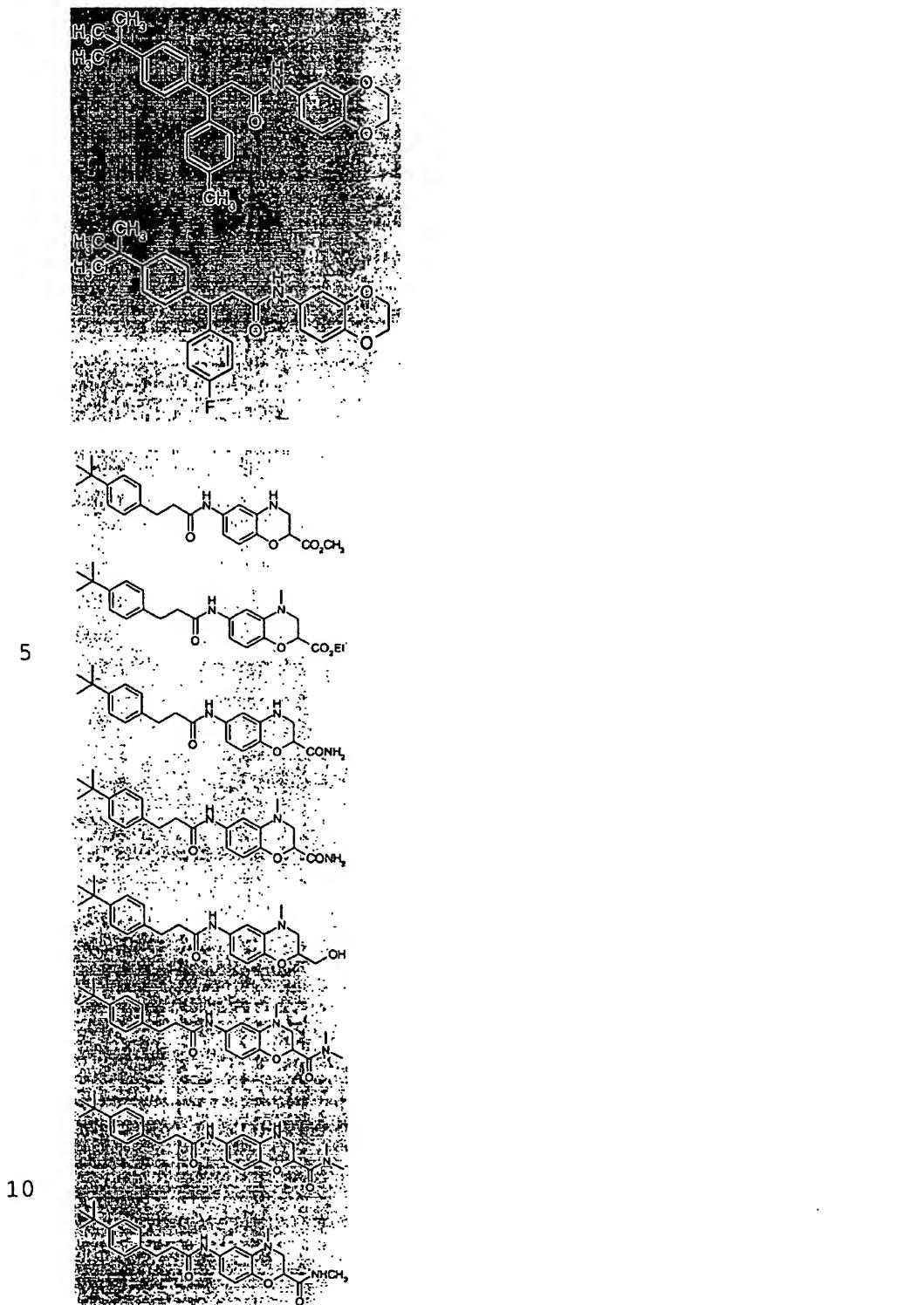


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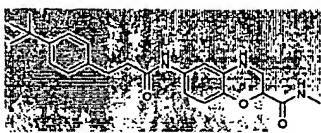
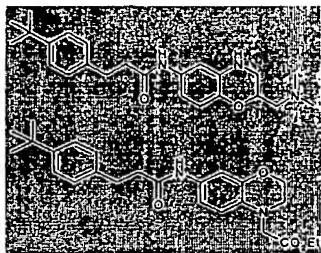
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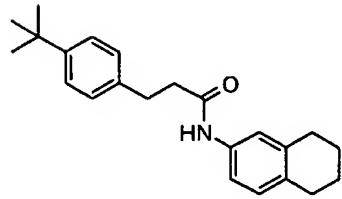
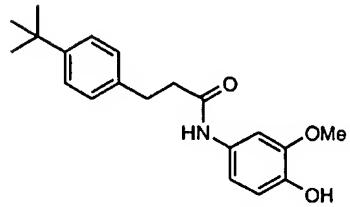
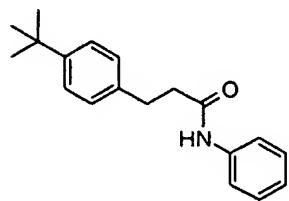
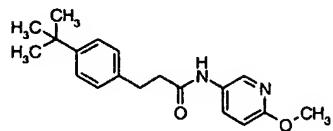
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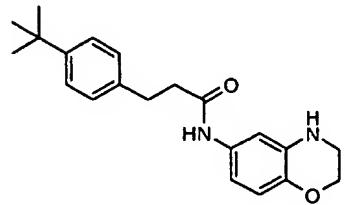
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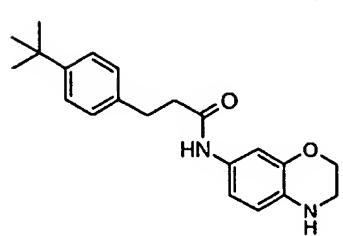
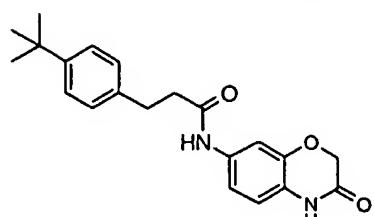
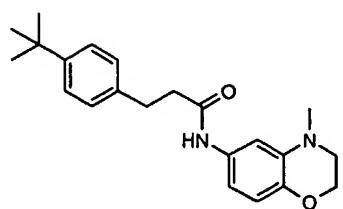
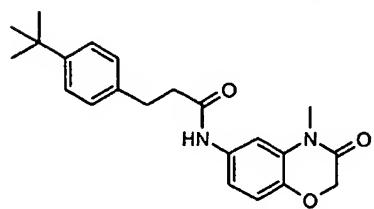
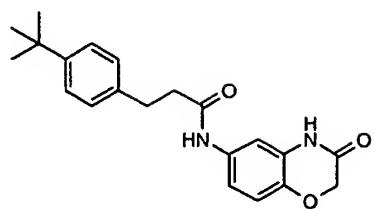
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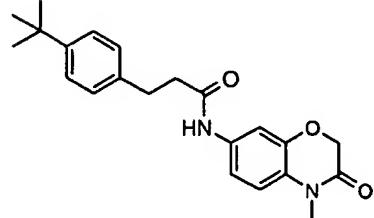
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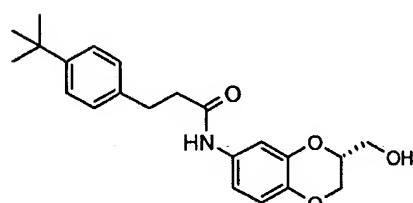
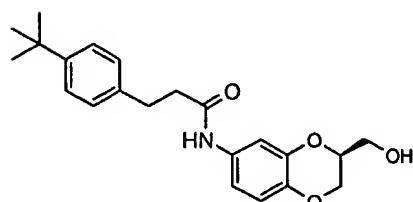
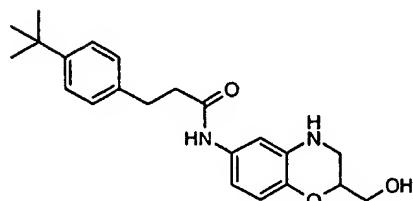
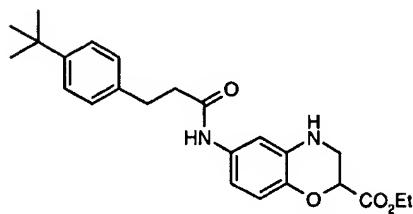
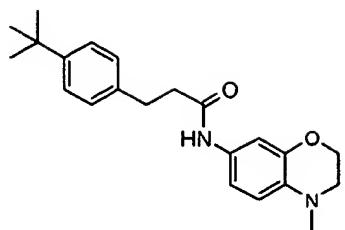
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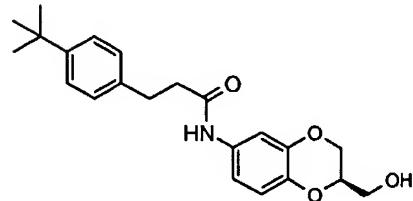
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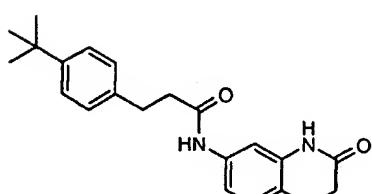
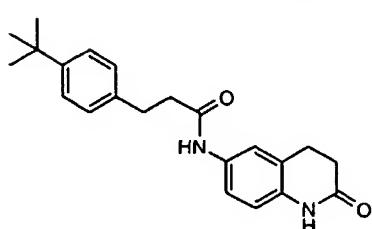
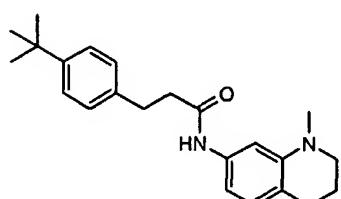
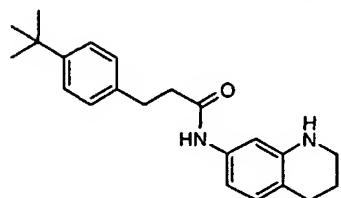
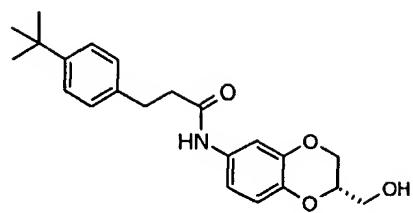
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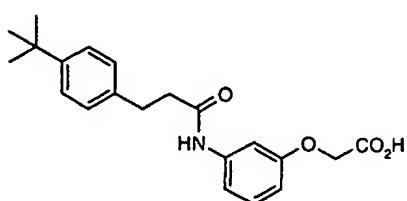
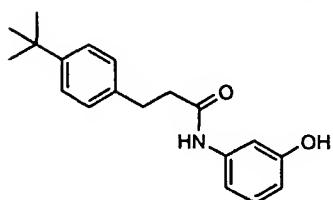
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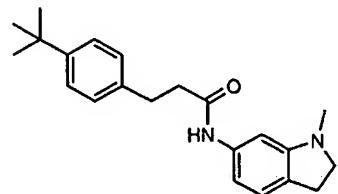
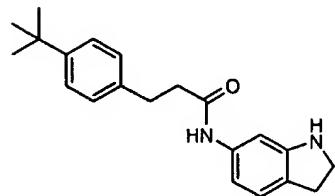
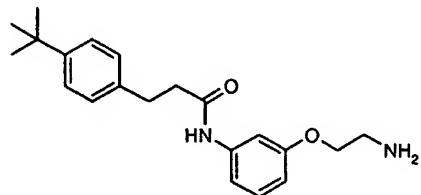
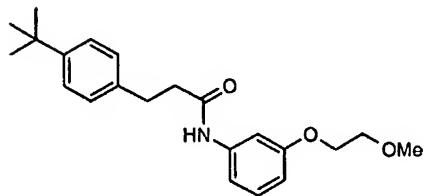
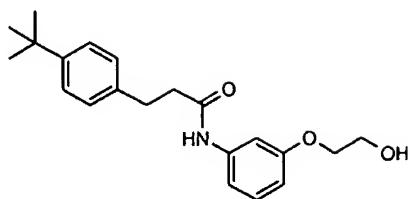
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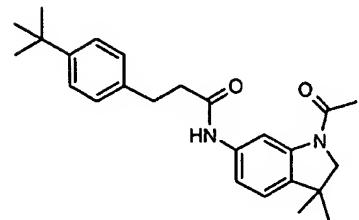
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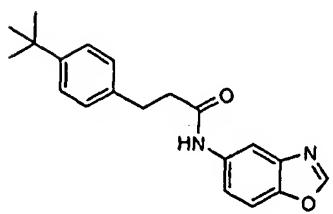
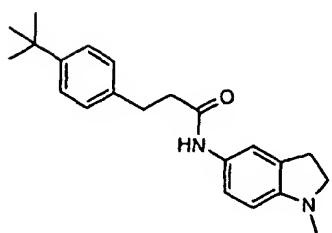
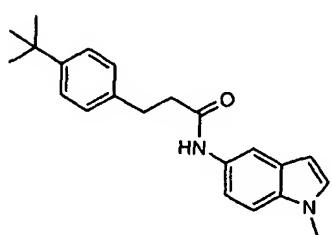
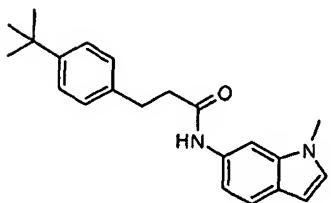
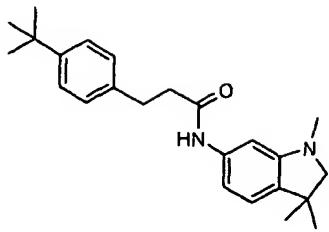
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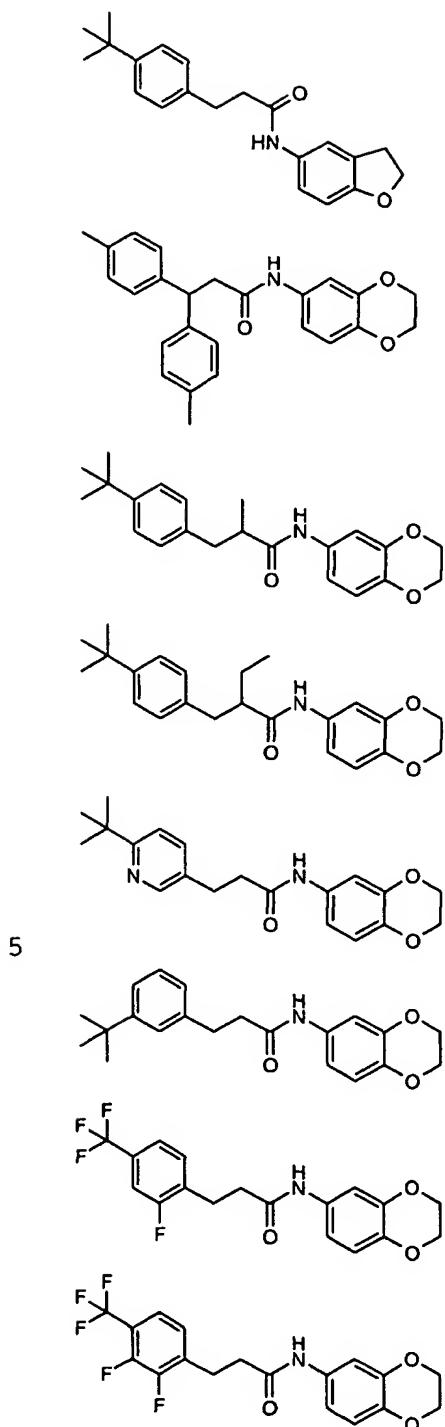
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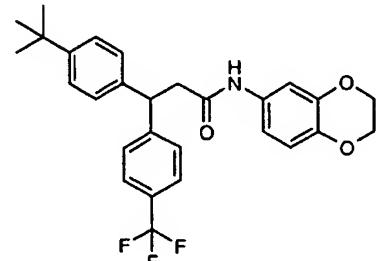
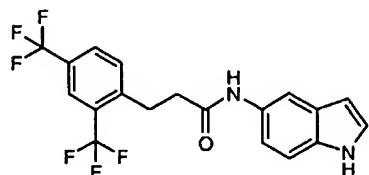
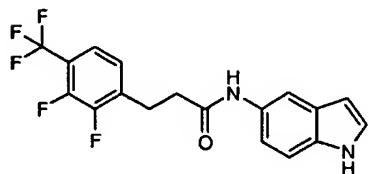
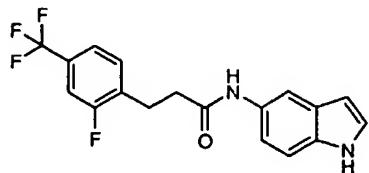
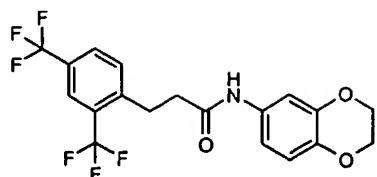
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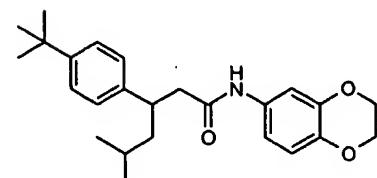
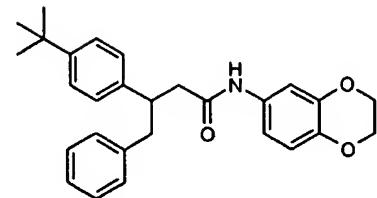
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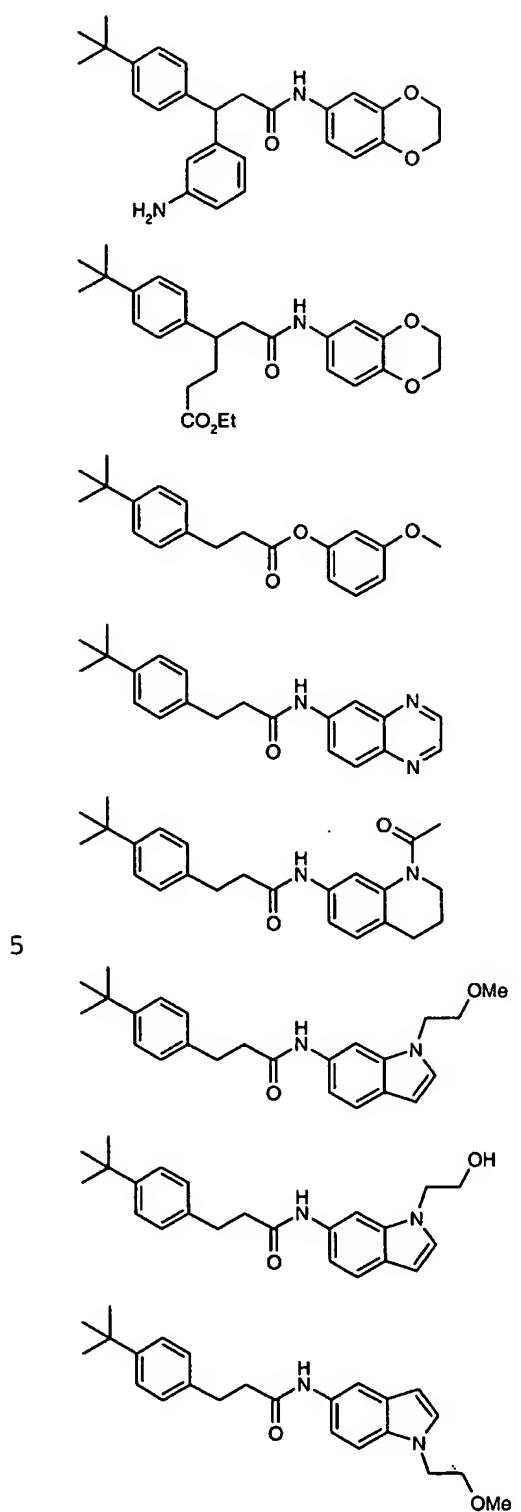
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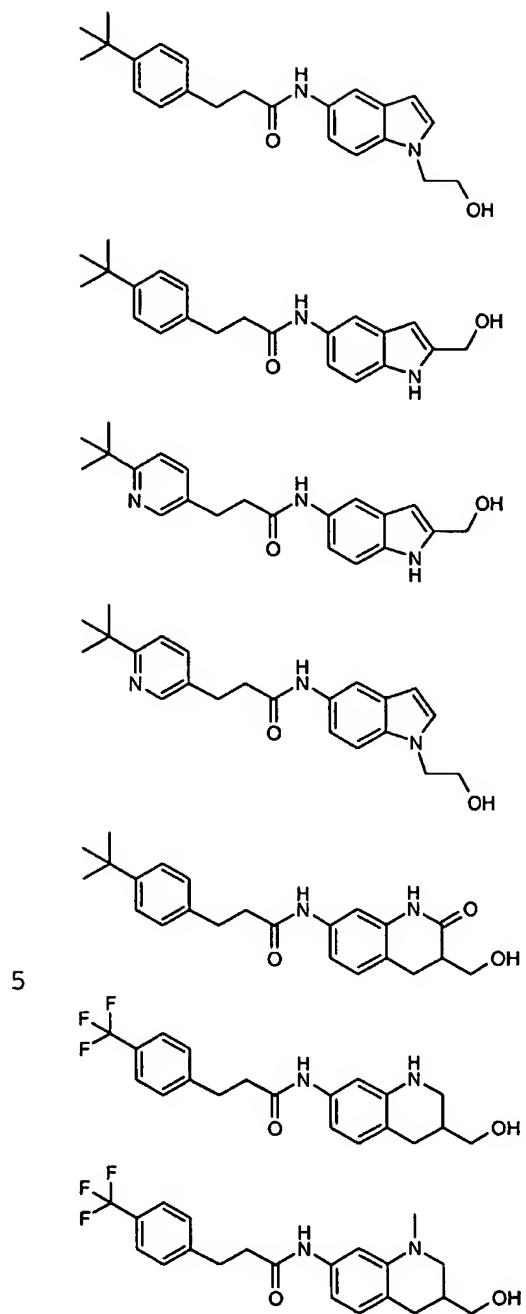
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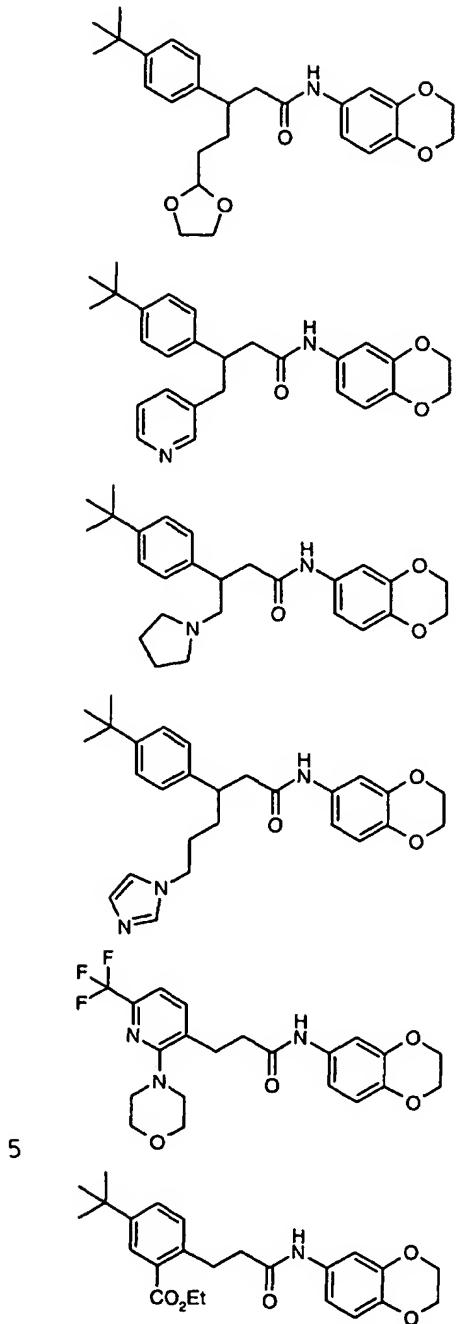
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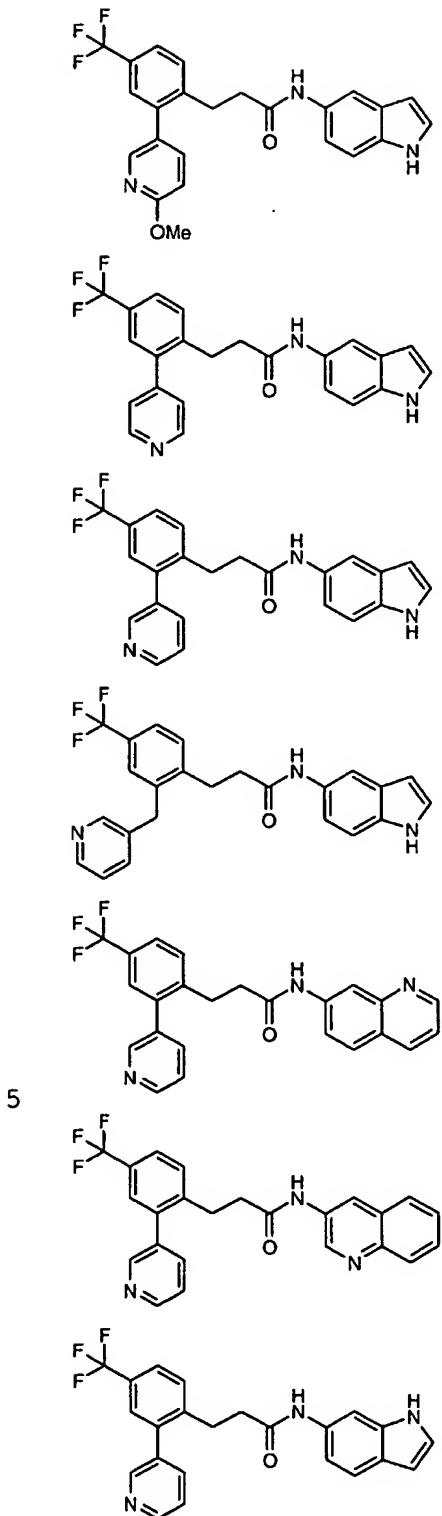
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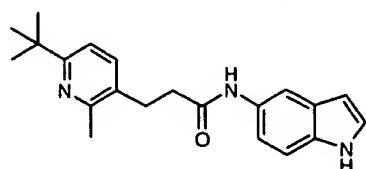
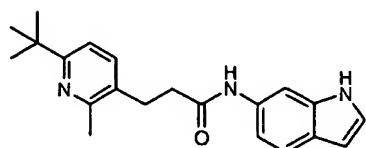
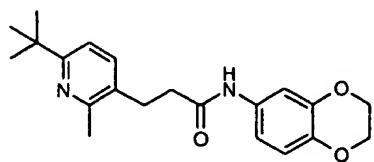
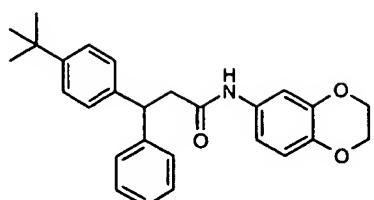
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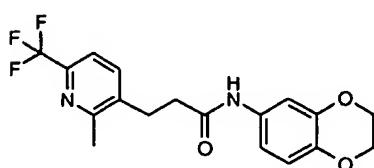
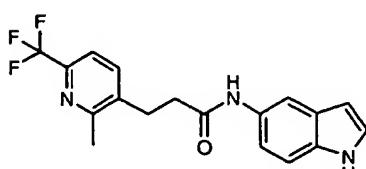
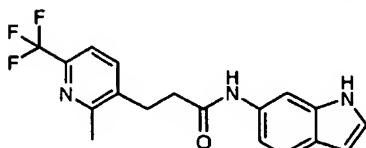
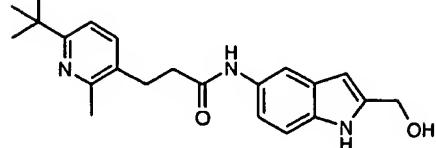
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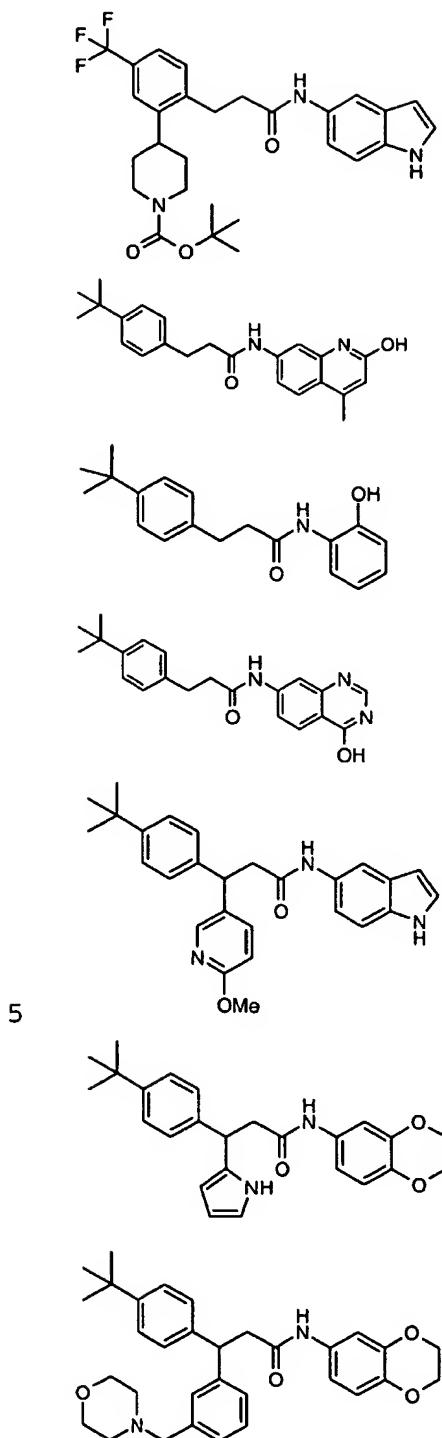
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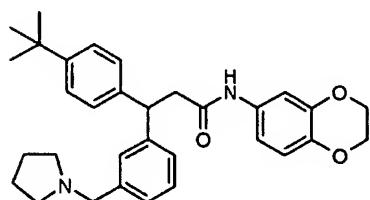
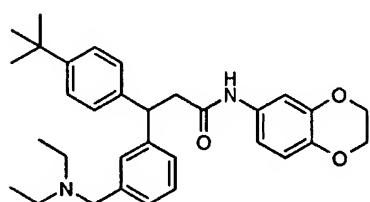
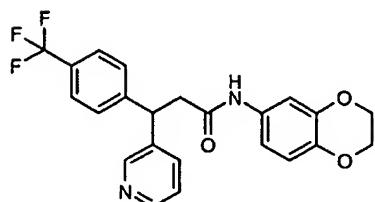
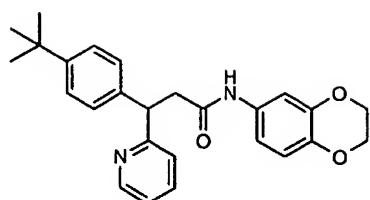
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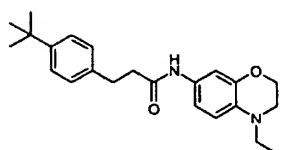
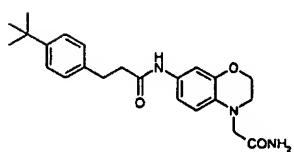
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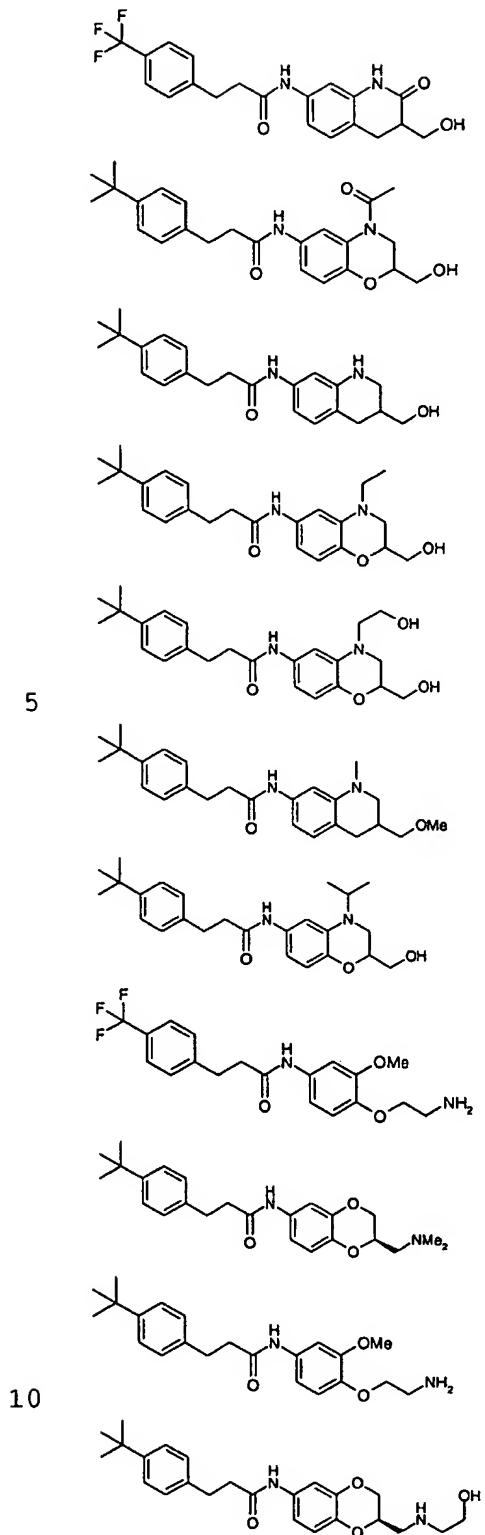
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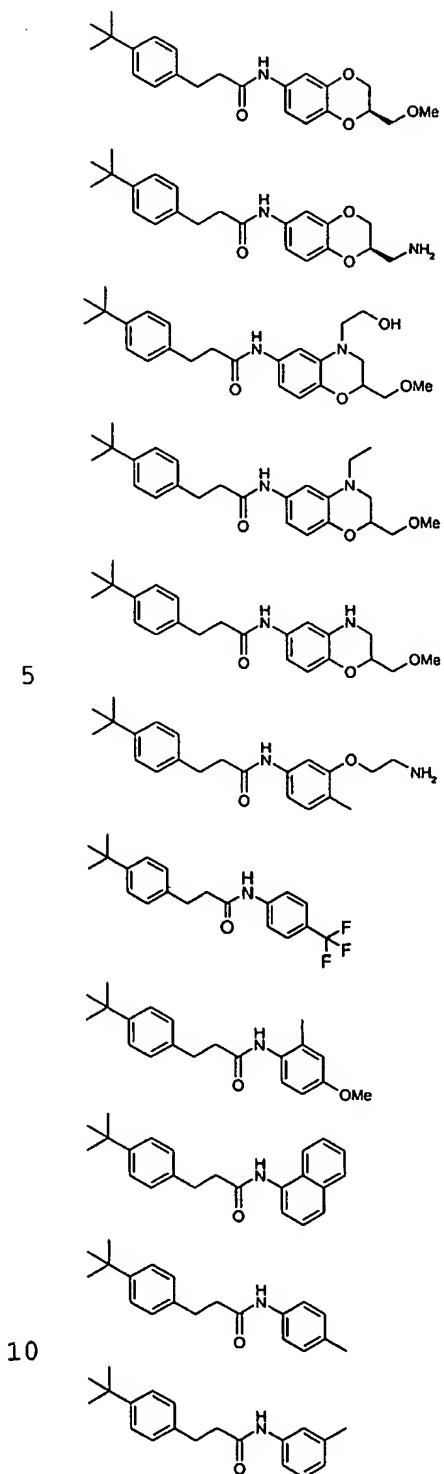
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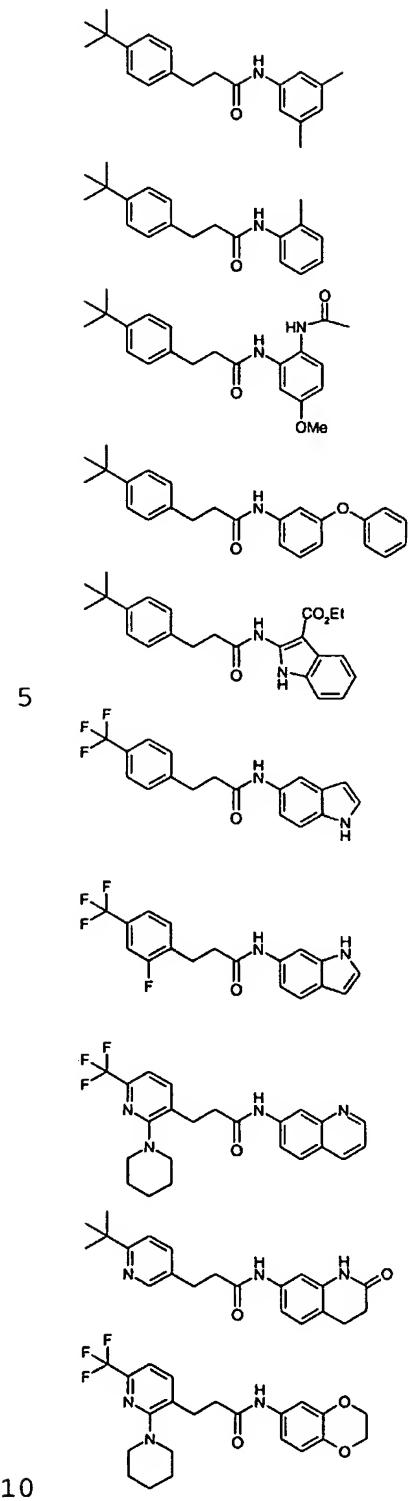
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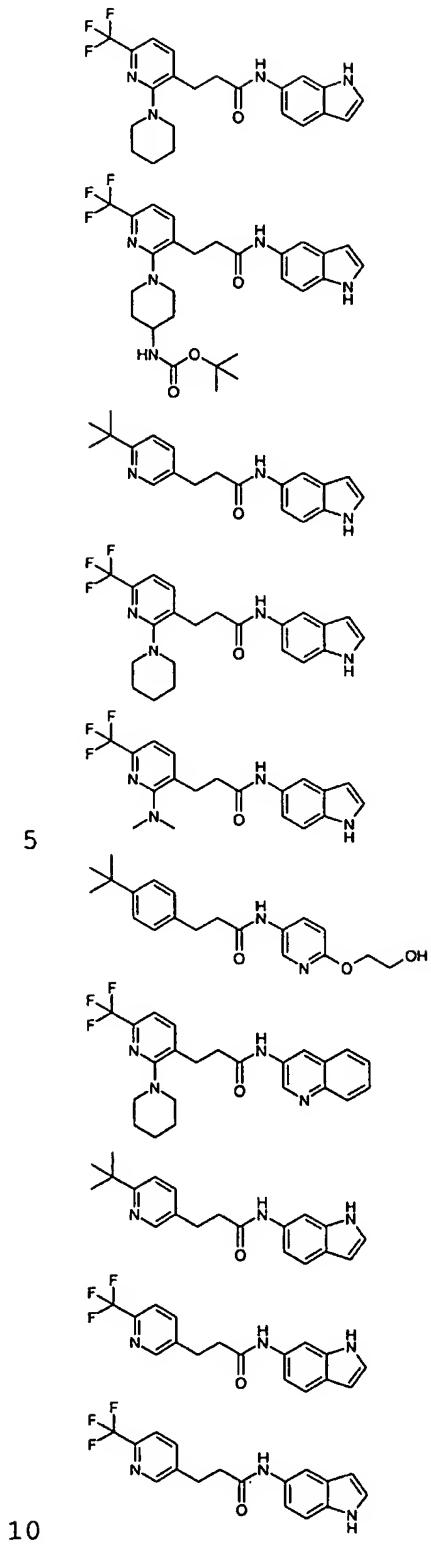
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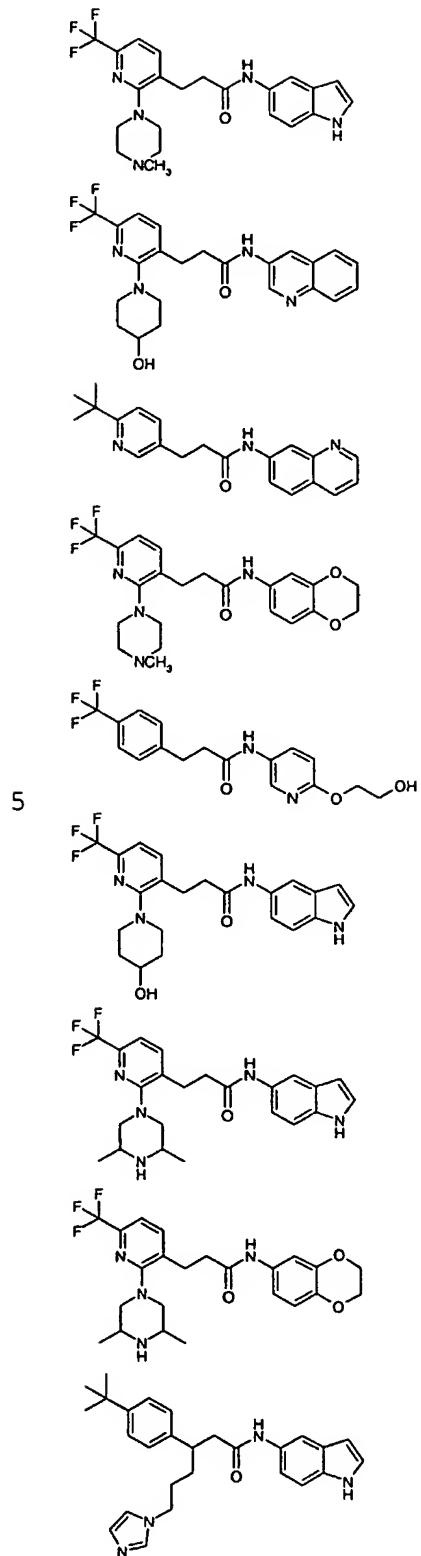
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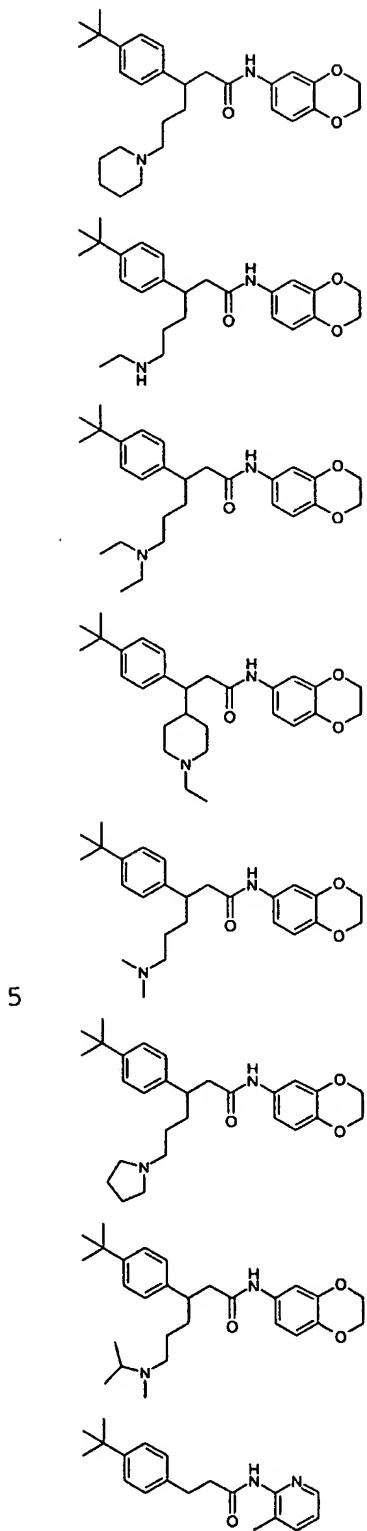
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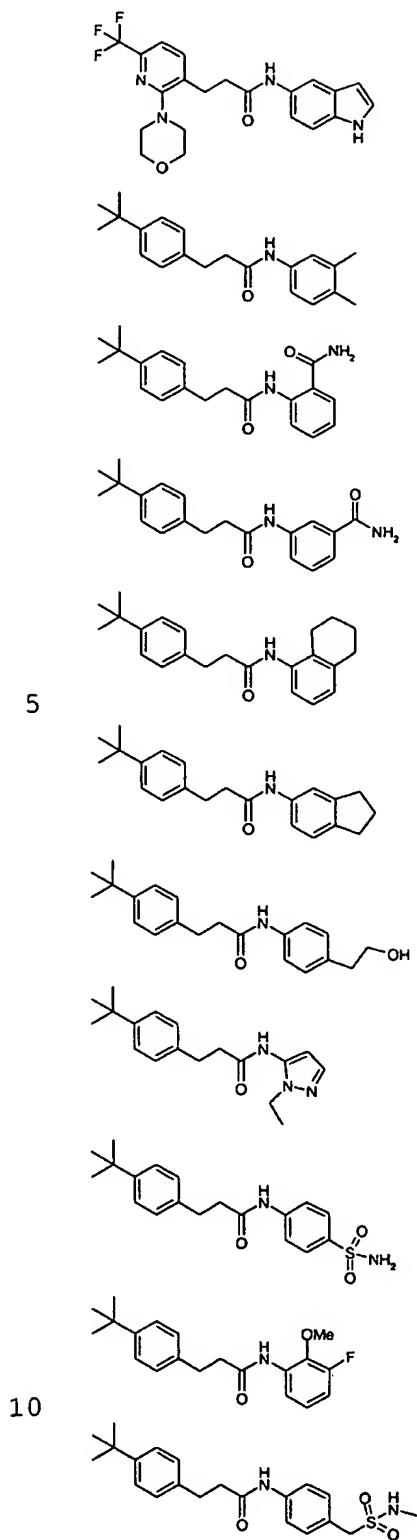
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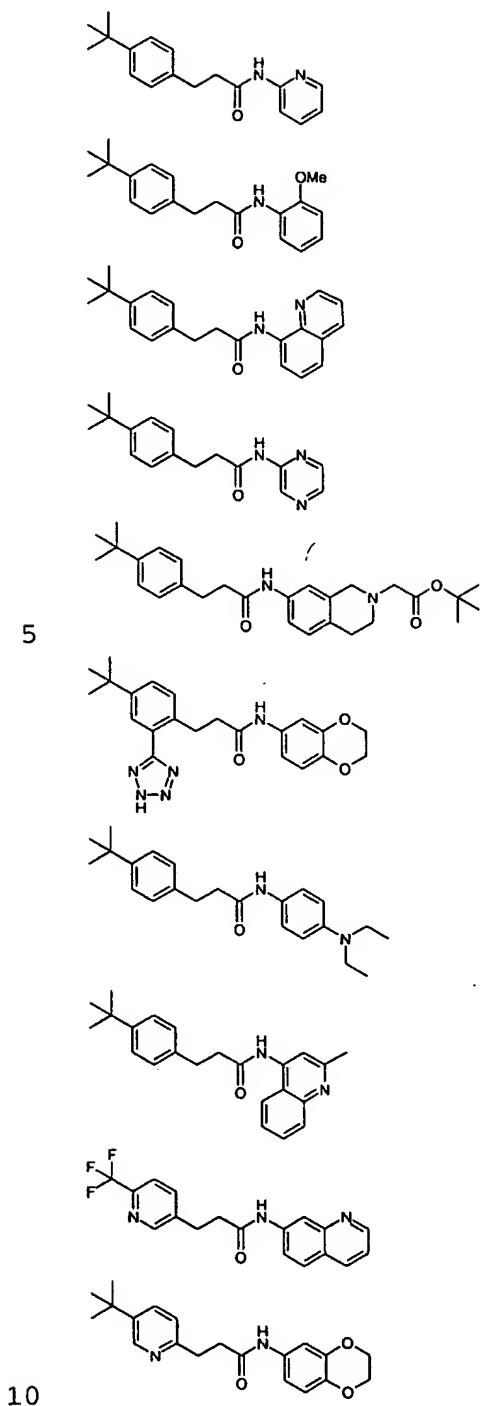
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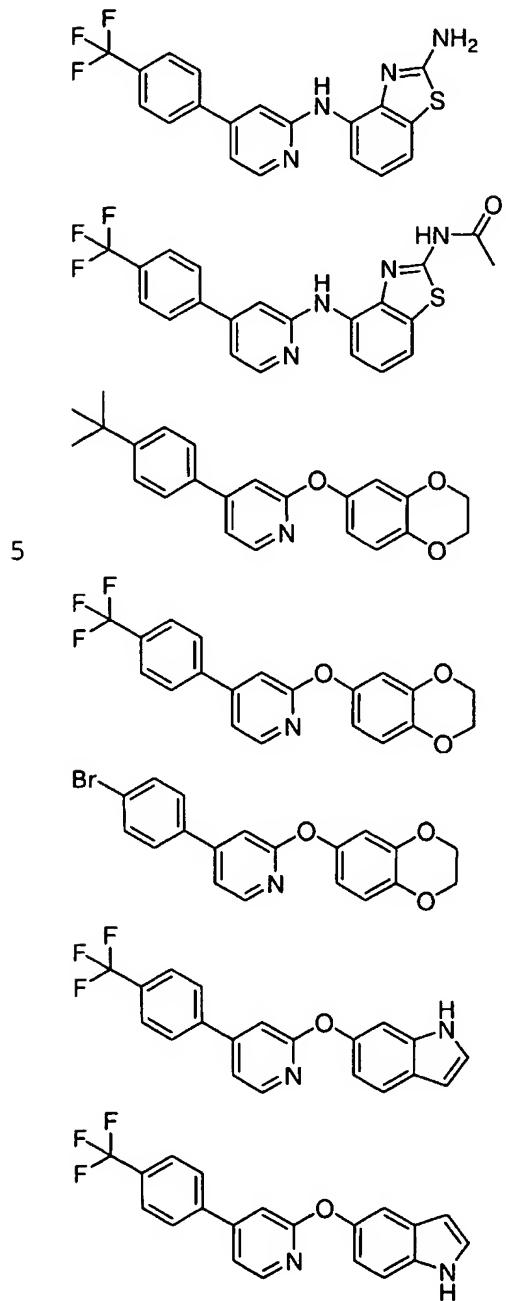


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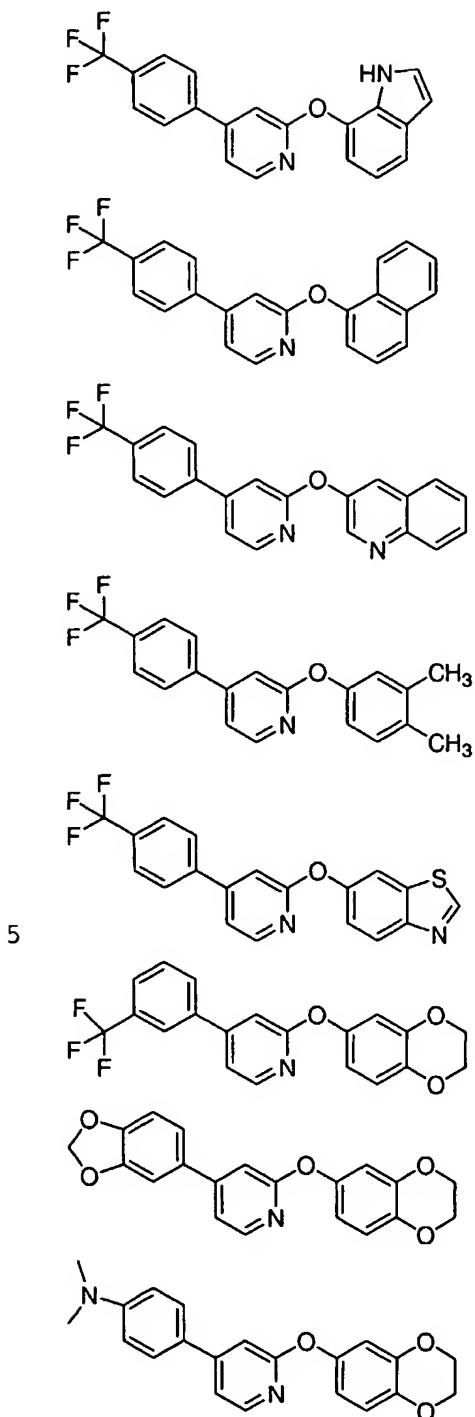


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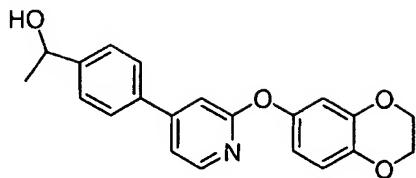
The following examples may also be made using the above generic schemes and synthetic examples:



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**Capsaicin-induced  $\text{Ca}^{2+}$  influx in primary dorsal root ganglion neurons**

Embryonic 19 day old (E19) dorsal root ganglia (DRG) were dissected from  
5 timed-pregnant, terminally anesthetized Sprague-Dawley rats (Charles River,  
Wilmington, MA) and collected in ice-cold L-15 media (Life Technologies,  
Grand Island, NY) containing 5% heat inactivated horse serum (Life  
Technologies). The DRG were then dissociated into single cell suspension using a  
papain dissociation system (Worthington Biochemical Corp., Freehold, NJ). The  
10 dissociated cells were pelleted at 200 x g for 5 min and re-suspended in EBSS  
containing 1 mg/ml ovomucoid inhibitor, 1 mg/ml ovalbumin and 0.005% DNase.  
Cell suspension was centrifuged through a gradient solution containing 10 mg/ml  
ovomucoid inhibitor, 10 mg/ml ovalbumin at 200 x g for 6 min to remove cell  
debris; and filtered through a 88- $\mu\text{m}$  nylon mesh (Fisher Scientific, Pittsburgh,  
PA) to remove any clumps. Cell number was determined with a hemocytometer  
15 and cells were seeded into poly-ornithine 100  $\mu\text{g}/\text{ml}$  (Sigma) and mouse laminin 1  
 $\mu\text{g}/\text{ml}$  (Life Technologies)-coated 96-well plates at  $10 \times 10^3$  cells/well in complete  
medium. The complete medium consists of minimal essential medium (MEM)  
and Ham's F12, 1:1, penicillin (100 U/ml), and streptomycin (100  $\mu\text{g}/\text{ml}$ ), and  
20 nerve growth factor (10ng/ml), 10% heat inactivated horse serum (Life  
Technologies). The cultures were kept at 37 °C, 5%  $\text{CO}_2$  and 100% humidity.  
For controlling the growth of non-neuronal cells, 5-fluoro-2'-deoxyuridine  
(75 $\mu\text{M}$ ) and uridine (180 $\mu\text{M}$ ) were included in the medium. Activation of VR1  
25 was achieved in these cellular assays using either a capsaicin stimulus (ranging  
from 0.01-10 $\mu\text{M}$ ) or by an acid stimulus (addition of 30mM Hepes/Mes buffered  
at pH 4.1). Compounds were also tested in an assay format to evaluate their  
agonist properties at VR1. The activation of VR1 is followed as a function of  
cellular uptake of radioactive calcium ( $^{45}\text{Ca}^{2+}$ :Amersham CES3-2mCi).

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Capsaicin Antagonist Assay: E-19 DRG cells at 3 days in culture are incubated with serial concentrations of VR1 antagonists, in HBSS (Hanks buffered saline solution supplemented with BSA 0.1mg/ml and 1 mM Hepes at pH 7.4) for 15 min, room temperature. Cells are then challenged with a VR1 agonist, capsaicin 5 (500 nM), in activation buffer containing 0.1mg/ml BSA, 15 mM Hepes, pH 7.4, and 10  $\mu$ Ci/ml  $^{45}\text{Ca}^{2+}$  (Amersham CES3-2mCi) in Ham's F12 for 2 min at room temperature.

Acid Antagonist Assay: Compounds are pre-incubated with E-19 DRG cells at room temperature for 2 minutes prior to addition of  $^{45}\text{Ca}^{2+}$  in 30mM Hepes/Mes 10 buffer (Final Assay pH 5) and then left for an additional 2 minutes prior to compound washout. Final concentration of  $^{45}\text{Ca}^{2+}$  (Amersham CES3-2mCi) is 10  $\mu$ Ci/mL.

Agonist Assay: Compounds are incubated with E-19 DRG cells at room temperature for 2 minutes in the presence of  $^{45}\text{Ca}^{2+}$  prior to compound washout. 15 Final  $^{45}\text{Ca}^{2+}$  (Amersham CES3-2mCi) at 10 $\mu$ Ci/mL.

Compound Washout and Analysis: Assay plates are washed using an ELX405 plate washer (Bio-Tek Instruments Inc.) immediately after functional assay. Wash 3 X with PBS, 0.1 mg/mL BSA. Aspirate between washes. Read plates using a MicroBeta Jet (Wallac Inc.). Compound activity is then calculated using 20 appropriate computational algorithms.

#### **$^{45}\text{Calcium}^{2+}$ Assay Protocol**

Compounds may be assayed using Chinese Hamster Ovary cell lines stably expressing either human VR1 or rat VR1 under a CMV promoter. Cells could be cultured in a Growth Medium, routinely passaged at 70% confluency using 25 trypsin and plated in an assay plate 24 hours prior to compound evaluation.

##### Possible Growth Medium:

- DMEM, high glucose (Gibco 11965-084).
- 10% Dialyzed serum (Hyclone SH30079.03).
- 1X Non-Essential Amino Acids (Gibco 11140-050).
- 30 1X Glutamine-Pen-Strep (Gibco 10378-016).
- Geneticin, 450 $\mu$ g/mL (Gibco 10131-035).

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Compounds could be diluted in 100% DMSO and tested for activity over several log units of concentration [40 $\mu$ M-2pM]. Compounds may be further diluted in HBSS buffer (pH 7.4) 0.1 mg/mL BSA, prior to evaluation. Final DMSO concentration in assay would be 0.5-1%. Each assay plate could be controlled  
5 with a buffer only and a known antagonist compound (either capsazepine or one of the described VR1 antagonists).

Activation of VR1 could be achieved in these cellular assays using either a capsaicin stimulus (ranging from 0.1-1 $\mu$ M) or by an acid stimulus (addition of 30mM Hepes/Mes buffered at pH 4.1). Compounds could also be tested in an  
10 assay format to evaluate their agonist properties at VR1.

Capsaicin Antagonist Assay: Compounds may be pre-incubated with cells (expressing either human or rat VR1) at room temperature for 2 minutes prior to addition of  $^{45}\text{Ca}^{2+}$  and Capsaicin and then left for an additional 2 minutes prior to compound washout. Capsaicin (200nM) can be added in HAM's F12, 0.1 mg/mL  
15 BSA, 15 mM Hepes at pH 7.4. Final  $^{45}\text{Ca}^{2+}$  (Amersham CES3-2mCi) added could be 10 $\mu\text{Ci}/\text{mL}$ .

Acid Antagonist Assay: Compounds can be pre-incubated with cells (expressing either human or rat VR1) for 2 minutes prior to addition of  $^{45}\text{Ca}^{2+}$  in 30mM Hepes/Mes buffer (Final Assay pH 5) and then left for an additional 2 minutes  
20 prior to compound washout. Final  $^{45}\text{Ca}^{2+}$  (Amersham CES3-2mCi) added could be 10 $\mu\text{Ci}/\text{mL}$ .

Agonist Assay: Compounds can be incubated with cells (expressing either human or rat VR1) for 2 minutes in the presence of  $^{45}\text{Ca}^{2+}$  prior to compound washout. Final  $^{45}\text{Ca}^{2+}$  (Amersham CES3-2mCi) added could be 10 $\mu\text{Ci}/\text{mL}$ .

25 Compound Washout and Analysis: Assay plates would be washed using an ELX405 plate washer (Bio-Tek Instruments Inc.) immediately after the functional assay. One could wash 3 X with PBS, 0.1 mg/mL BSA, aspirating between washes. Plates could then be read using a MicroBeta Jet (Wallac Inc.) and compound activity calculated using appropriate computational algorithms.

30 Useful nucleic acid sequences and proteins may be found in U.S. Patent Nos. 6,335,180, 6,406,908 and 6,239,267, herein incorporated by reference in their entirety.

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For the treatment of vanilloid-receptor-diseases, such as acute, inflammatory and neuropathic pain, dental pain, general headache, migraine, cluster headache, mixed-vascular and non-vascular syndromes, tension headache, general inflammation, arthritis, rheumatic diseases, osteoarthritis, inflammatory bowel disorders, inflammatory eye disorders, inflammatory or unstable bladder disorders, psoriasis, skin complaints with inflammatory components, chronic inflammatory conditions, inflammatory pain and associated hyperalgesia and allodynia, neuropathic pain and associated hyperalgesia and allodynia, diabetic neuropathy pain, causalgia, sympathetically maintained pain, deafferentation syndromes, asthma, epithelial tissue damage or dysfunction, herpes simplex, disturbances of visceral motility at respiratory, genitourinary, gastrointestinal or vascular regions, wounds, burns, allergic skin reactions, pruritis, vitiligo, general gastrointestinal disorders, gastric ulceration, duodenal ulcers, diarrhea, gastric lesions induced by necrotising agents, hair growth, vasomotor or allergic rhinitis, bronchial disorders or bladder disorders, the compounds of the present invention may be administered orally, parentally, by inhalation spray, rectally, or topically in dosage unit formulations containing conventional pharmaceutically acceptable carriers, adjuvants, and vehicles. The term parenteral as used herein includes, subcutaneous, intravenous, intramuscular, intrasternal, infusion techniques or intraperitoneally.

Treatment of diseases and disorders herein is intended to also include the prophylactic administration of a compound of the invention, a pharmaceutical salt thereof, or a pharmaceutical composition of either to a subject (*i.e.*, an animal, preferably a mammal, most preferably a human) believed to be in need of preventative treatment, such as, for example, pain, inflammation and the like.

The dosage regimen for treating vanilloid-receptor-mediated diseases, cancer, and/or hyperglycemia with the compounds of this invention and/or compositions of this invention is based on a variety of factors, including the type of disease, the age, weight, sex, medical condition of the patient, the severity of the condition, the route of administration, and the particular compound employed. Thus, the dosage regimen may vary widely, but can be determined routinely using standard methods. Dosage levels of the order from about 0.01 mg to 30 mg per

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kilogram of body weight per day, preferably from about 0.1 mg to 10 mg/kg, more preferably from about 0.25 mg to 1 mg/kg are useful for all methods of use disclosed herein.

The pharmaceutically active compounds of this invention can be  
5 processed in accordance with conventional methods of pharmacy to produce medicinal agents for administration to patients, including humans and other mammals.

For oral administration, the pharmaceutical composition may be in the form of, for example, a capsule, a tablet, a suspension, or liquid. The  
10 pharmaceutical composition is preferably made in the form of a dosage unit containing a given amount of the active ingredient. For example, these may contain an amount of active ingredient from about 1 to 2000 mg, preferably from about 1 to 500 mg, more preferably from about 5 to 150 mg. A suitable daily dose for a human or other mammal may vary widely depending on the condition  
15 of the patient and other factors, but, once again, can be determined using routine methods.

The active ingredient may also be administered by injection as a composition with suitable carriers including saline, dextrose, or water. The daily parenteral dosage regimen will be from about 0.1 to about 30 mg/kg of total body  
20 weight, preferably from about 0.1 to about 10 mg/kg, and more preferably from about 0.25 mg to 1 mg/kg.

Injectable preparations, such as sterile injectable aqueous or oleaginous suspensions, may be formulated according to the known art using suitable dispersing or wetting agents and suspending agents. The sterile injectable  
25 preparation may also be a sterile injectable solution or suspension in a non-toxic parenterally acceptable diluent or solvent, for example as a solution in 1,3-butanediol. Among the acceptable vehicles and solvents that may be employed are water, Ringer's solution, and isotonic sodium chloride solution. In addition, sterile, fixed oils are conventionally employed as a solvent or suspending  
30 medium. For this purpose any bland fixed oil may be employed, including synthetic mono- or diglycerides. In addition, fatty acids such as oleic acid find use in the preparation of injectables.

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Suppositories for rectal administration of the drug can be prepared by mixing the drug with a suitable non-irritating excipient such as cocoa butter and polyethylene glycols that are solid at ordinary temperatures but liquid at the rectal temperature and will therefore melt in the rectum and release the drug.

5 A suitable topical dose of active ingredient of a compound of the invention is 0.1 mg to 150 mg administered one to four, preferably one or two times daily. For topical administration, the active ingredient may comprise from 0.001% to 10% w/w, *e.g.*, from 1% to 2% by weight of the formulation, although it may comprise as much as 10% w/w, but preferably not more than 5% w/w, and  
10 more preferably from 0.1% to 1% of the formulation.

Formulations suitable for topical administration include liquid or semi-liquid preparations suitable for penetration through the skin (*e.g.*, liniments, lotions, ointments, creams, or pastes) and drops suitable for administration to the eye, ear, or nose.

15 For administration, the compounds of this invention are ordinarily combined with one or more adjuvants appropriate for the indicated route of administration. The compounds may be admixed with lactose, sucrose, starch powder, cellulose esters of alkanoic acids, stearic acid, talc, magnesium stearate, magnesium oxide, sodium and calcium salts of phosphoric and sulfuric acids,  
20 acacia, gelatin, sodium alginate, polyvinyl-pyrrolidine, and/or polyvinyl alcohol, and tableted or encapsulated for conventional administration. Alternatively, the compounds of this invention may be dissolved in saline, water, polyethylene glycol, propylene glycol, ethanol, corn oil, peanut oil, cottonseed oil, sesame oil, tragacanth gum, and/or various buffers. Other adjuvants and modes of  
25 administration are well known in the pharmaceutical art. The carrier or diluent may include time delay material, such as glycetyl monostearate or glycetyl distearate alone or with a wax, or other materials well known in the art.

The pharmaceutical compositions may be made up in a solid form (including granules, powders or suppositories) or in a liquid form (*e.g.*, solutions, suspensions, or emulsions). The pharmaceutical compositions may be subjected to conventional pharmaceutical operations such as sterilization and/or may contain

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conventional adjuvants, such as preservatives, stabilizers, wetting agents, emulsifiers, buffers etc.

Solid dosage forms for oral administration may include capsules, tablets, pills, powders, and granules. In such solid dosage forms, the active compound  
5 may be admixed with at least one inert diluent such as sucrose, lactose, or starch.  
Such dosage forms may also comprise, as in normal practice, additional substances other than inert diluents, *e.g.*, lubricating agents such as magnesium stearate. In the case of capsules, tablets, and pills, the dosage forms may also comprise buffering agents. Tablets and pills can additionally be prepared with  
10 enteric coatings.

Liquid dosage forms for oral administration may include pharmaceutically acceptable emulsions, solutions, suspensions, syrups, and elixirs containing inert diluents commonly used in the art, such as water. Such compositions may also comprise adjuvants, such as wetting, sweetening, flavoring, and perfuming  
15 agents.

Compounds of the present invention can possess one or more asymmetric carbon atoms and are thus capable of existing in the form of optical isomers as well as in the form of racemic or non-racemic mixtures thereof. The optical isomers can be obtained by resolution of the racemic mixtures according to conventional processes, *e.g.*, by formation of diastereoisomeric salts, by treatment with an optically active acid or base. Examples of appropriate acids are tartaric, diacetyl tartaric, dibenzoyl tartaric, ditoluoyl tartaric, and camphorsulfonic acid and then separation of the mixture of diastereoisomers by crystallization followed by liberation of the optically active bases from these salts. A different process for  
20 separation of optical isomers involves the use of a chiral chromatography column optimally chosen to maximize the separation of the enantiomers. Still another available method involves synthesis of covalent diastereoisomeric molecules by reacting compounds of the invention with an optically pure acid in an activated form or an optically pure isocyanate. The synthesized diastereoisomers can be  
25 separated by conventional means such as chromatography, distillation, crystallization or sublimation, and then hydrolyzed to deliver the enantiomerically pure compound. The optically active compounds of the invention can likewise be  
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obtained by using active starting materials. These isomers may be in the form of a free acid, a free base, an ester or a salt.

Likewise, the compounds of this invention may exist as isomers, that is compounds of the same molecular formula but in which the atoms, relative to one another, are arranged differently. In particular, the alkylene substituents of the compounds of this invention, are normally and preferably arranged and inserted into the molecules as indicated in the definitions for each of these groups, being read from left to right. However, in certain cases, one skilled in the art will appreciate that it is possible to prepare compounds of this invention in which these substituents are reversed in orientation relative to the other atoms in the molecule. That is, the substituent to be inserted may be the same as that noted above except that it is inserted into the molecule in the reverse orientation. One skilled in the art will appreciate that these isomeric forms of the compounds of this invention are to be construed as encompassed within the scope of the present invention.

The compounds of the present invention can be used in the form of salts derived from inorganic or organic acids. The salts include, but are not limited to, the following: acetate, adipate, alginate, citrate, aspartate, benzoate, benzenesulfonate, bisulfate, butyrate, camphorate, camphorsulfonate, digluconate, cyclopentanepropionate, dodecylsulfate, ethanesulfonate, glucoheptanoate, glycerophosphate, hemisulfate, heptanoate, hexanoate, fumarate, hydrochloride, hydrobromide, hydroiodide, 2-hydroxyethanesulfonate, lactate, maleate, methansulfonate, nicotinate, 2-naphthalenesulfonate, oxalate, palmoate, pectinate, persulfate, 2-phenylpropionate, picrate, pivalate, propionate, succinate, tartrate, thiocyanate, tosylate, mesylate, and undecanoate. Also, the basic nitrogen-containing groups can be quaternized with such agents as lower alkyl halides, such as methyl, ethyl, propyl, and butyl chloride, bromides and iodides; dialkyl sulfates like dimethyl, diethyl, dibutyl, and diamyl sulfates, long chain halides such as decyl, lauryl, myristyl and stearyl chlorides, bromides and iodides, aralkyl halides like benzyl and phenethyl bromides, and others. Water or oil-soluble or dispersible products are thereby obtained.

Examples of acids that may be employed to form pharmaceutically acceptable acid addition salts include such inorganic acids as hydrochloric acid,

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sulfuric acid and phosphoric acid and such organic acids as oxalic acid, maleic acid, succinic acid and citric acid. Other examples include salts with alkali metals or alkaline earth metals, such as sodium, potassium, calcium or magnesium or with organic bases.

5       Also encompassed in the scope of the present invention are pharmaceutically acceptable esters of a carboxylic acid or hydroxyl containing group, including a metabolically labile ester or a prodrug form of a compound of this invention. A metabolically labile ester is one which may produce, for example, an increase in blood levels and prolong the efficacy of the corresponding  
10      non-esterified form of the compound. A prodrug form is one that is not in an active form of the molecule as administered but which becomes therapeutically active after some in vivo activity or biotransformation, such as metabolism, for example, enzymatic or hydrolytic cleavage. For a general discussion of prodrugs involving esters see Svensson and Tunek Drug Metabolism Reviews 165 (1988) and Bundgaard Design of Prodrugs, Elsevier (1985). Examples of a masked carboxylate anion include a variety of esters, such as alkyl (for example, methyl, ethyl), cycloalkyl (for example, cyclohexyl), aralkyl (for example, benzyl, p-methoxybenzyl), and alkylcarbonyloxyalkyl (for example, pivaloyloxymethyl). Amines have been masked as arylcarbonyloxymethyl substituted derivatives  
15      which are cleaved by esterases in vivo releasing the free drug and formaldehyde (Bungaard J. Med. Chem. 2503 (1989)). Also, drugs containing an acidic NH group, such as imidazole, imide, indole and the like, have been masked with N-acyloxymethyl groups (Bundgaard Design of Prodrugs, Elsevier (1985)). Hydroxy groups have been masked as esters and ethers. EP 039,051 (Sloan and  
20      Little, 4/11/81) discloses Mannich-base hydroxamic acid prodrugs, their preparation and use. Esters of a compound of this invention, may include, for example, the methyl, ethyl, propyl, and butyl esters, as well as other suitable esters formed between an acidic moiety and a hydroxyl containing moiety. Metabolically labile esters, may include, for example, methoxymethyl,  
25      ethoxymethyl, iso-propoxymethyl,  $\alpha$ -methoxyethyl, groups such as  $\alpha$ -((C<sub>1</sub>-C<sub>4</sub>)alkyloxy)ethyl, for example, methoxyethyl, ethoxyethyl, propoxethyl, iso-propoxyethyl, etc.; 2-oxo-1,3-dioxolen-4-ylmethyl groups, such as 5-methyl-

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2-oxo-1,3-dioxolen-4-ylmethyl, etc.; C<sub>1</sub>-C<sub>3</sub> alkylthiomethyl groups, for example, methylthiomethyl, ethylthiomethyl, isopropylthiomethyl, etc.; acyloxymethyl groups, for example, pivaloyloxymethyl,  $\alpha$ -acetoxymethyl, etc.; ethoxycarbonyl-1-methyl; or  $\alpha$ -acyloxy- $\alpha$ -substituted methyl groups, for example  $\alpha$ -acetoxymethyl.

5       Further, the compounds of the invention may exist as crystalline solids which can be crystallized from common solvents such as ethanol, N,N-dimethylformamide, water, or the like. Thus, crystalline forms of the compounds of the invention may exist as polymorphs, solvates and/or hydrates of the parent compounds or their pharmaceutically acceptable salts. All of such forms likewise  
10 are to be construed as falling within the scope of the invention.

15     While the compounds of the invention can be administered as the sole active pharmaceutical agent, they can also be used in combination with one or more compounds of the invention or other agents. When administered as a combination, the therapeutic agents can be formulated as separate compositions that are given at the same time or different times, or the therapeutic agents can be given as a single composition.

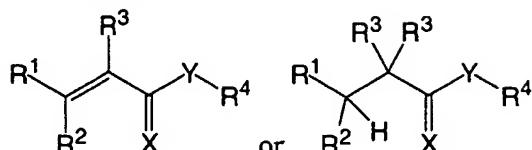
20     The foregoing is merely illustrative of the invention and is not intended to limit the invention to the disclosed compounds. Variations and changes, which are obvious to one skilled in the art are intended to be within the scope and nature of the invention which are defined in the appended claims.

From the foregoing description, one skilled in the art can easily ascertain the essential characteristics of this invention, and without departing from the spirit and scope thereof, can make various changes and modifications of the invention to adapt it to various usages and conditions.

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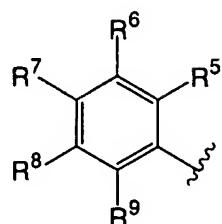
We Claim:

1. A compound having the structure:



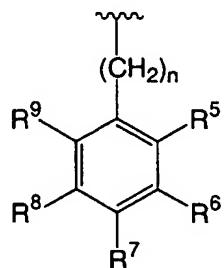
5 wherein:

R<sup>1</sup> is



or a naphthyl or saturated or unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 heteroatoms independently selected from N, O and S, wherein  
10 no more than 2 of the ring members are O or S, wherein the heterocycle is optionally fused with a phenyl ring, and the naphthyl, heterocycle or fused phenyl ring is substituted by 0, 1, 2 or 3 substituents independently selected from R<sup>5</sup>, R<sup>6</sup> and R<sup>7</sup>;

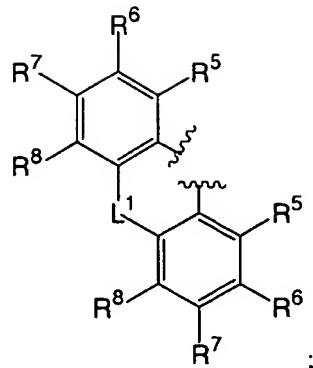
15 R<sup>2</sup> is H, hydroxy, halo, C<sub>1-6</sub>alkyl substituted by 0, 1 or 2 substituents selected from R<sup>10</sup>,



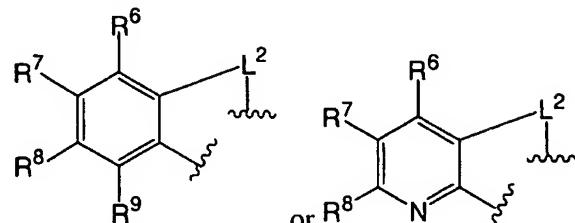
or a saturated or unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 heteroatoms independently selected from N, O and S, wherein no more than 2 of the ring members are O or S, wherein the heterocycle is optionally fused with a phenyl ring, and the heterocycle or fused phenyl ring is substituted by 0, 1, 2 or 3 substituents independently selected from R<sup>5</sup>, R<sup>6</sup> and R<sup>7</sup>;

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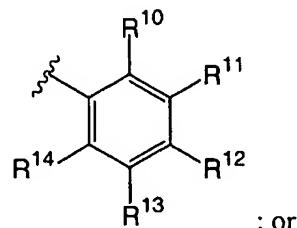
or R<sup>1</sup> and R<sup>2</sup> together are



R<sup>3</sup> is H or C<sub>1-4</sub>alkyl; or R<sup>1</sup> and R<sup>3</sup> together are



5           R<sup>4</sup> is



; or

R<sup>4</sup> is a saturated or unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 atoms selected from O, N and S that is optionally vicinally fused with a saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected from O, N and S with the remaining atoms being carbon, so long as the combination of O and S atoms is not greater than 2, wherein the carbon atoms of the heterocycle and bridge are substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OR<sup>a</sup>, -S(=O)<sub>n</sub>C<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -O-C<sub>1-6</sub>alkylOR<sup>a</sup>, -O-C<sub>1-6</sub>alkylC(=O)OR<sup>a</sup>, -NR<sup>a</sup>R<sup>a</sup>, -NR<sup>a</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>a</sup>-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -NR<sup>a</sup>-C<sub>1-6</sub>alkylOR<sup>a</sup>, -C(=O)C<sub>1-6</sub>alkyl, -C(=O)OC<sub>1-6</sub>alkyl, -OC(=O)C<sub>1-6</sub>alkyl, -C(=O)NR<sup>a</sup>C<sub>1-6</sub>alkyl and -NR<sup>a</sup>C(=O)C<sub>1-6</sub>alkyl; or R<sup>4</sup> is 10-membered bicyclic ring

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comprising fused 6-membered rings, containing 0, 1, 2, 3 or 4 N atoms with the remainder being carbon atoms, with at least one of the 6-membered rings being aromatic, wherein the carbon atoms are substituted by H, halo, OR<sup>a</sup>, NR<sup>a</sup>R<sup>a</sup>, C<sub>1-6</sub>alkyl and C<sub>1-4</sub>haloalkyl; and saturated carbon atoms may be additionally substituted by =O; except that when R<sup>1</sup> is 4-chlorophenyl, 3-bromophenyl, 5 3-nitrophenyl, 2-nitro-3-chlorophenyl, 3,4-methylenedioxyphenyl, 3-methylthiophenyl or 2,3,4-methoxyphenyl, then R<sup>4</sup> is not phenyl substituted by 1 or 2 substituents selected from halo and C<sub>1-4</sub>alkyl; and R<sup>1</sup> and R<sup>4</sup> are not both 10 3,4-methylenedioxyphenyl; and when R<sup>1</sup> is 4-trifluoromethylphenyl, then R<sup>4</sup> is not pyridinyl, 2-methyl-4-aminoquinolinyl or 3,3-dimethyl-1,3-dihydro-indol-2-on-6-yl;

R<sup>5</sup> is independently, at each instance, H, C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OC<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -O-C<sub>1-6</sub>alkylOR<sup>a</sup>, -NR<sup>a</sup>R<sup>a</sup>, -NR<sup>a</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>a</sup>-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup> or -NR<sup>a</sup>-C<sub>1-6</sub>alkylOR<sup>a</sup>; or R<sup>5</sup> is 15 a saturated or unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 atoms selected from O, N and S;

R<sup>6</sup> is independently, at each instance, H, C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OC<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -O-C<sub>1-6</sub>alkylOR<sup>a</sup>, -NR<sup>a</sup>R<sup>a</sup>, -NR<sup>a</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>a</sup>-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup> or -NR<sup>a</sup>-C<sub>1-6</sub>alkylOR<sup>a</sup>; or R<sup>5</sup> 20 and R<sup>6</sup> together are a saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected from O, N and S with the remaining atoms being carbon, so long as the combination of O and S atoms is not greater than 2, wherein the carbon atoms of the bridge are substituted by 0, 1, 2 or 3 substituents selected from halo, C<sub>1-6</sub>alkyl, (=O), -OC<sub>1-6</sub>alkyl, -NR<sup>a</sup>C<sub>1-6</sub>alkyl, -C<sub>1-6</sub>alkylOR<sup>a</sup> and 25 C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, and the available N atoms of the bridge are substituted by R<sup>a</sup>, -C<sub>1-6</sub>alkylOR<sup>a</sup> or C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>;

R<sup>7</sup> is independently, at each instance, H, C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OC<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -O-C<sub>1-6</sub>alkylOR<sup>a</sup>, -NR<sup>a</sup>R<sup>a</sup>, -NR<sup>a</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>a</sup>-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup> or -NR<sup>a</sup>-C<sub>1-6</sub>alkylOR<sup>a</sup>;

R<sup>8</sup> is independently, at each instance, H, C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OC<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -O-C<sub>1-6</sub>alkylOR<sup>a</sup>, -NR<sup>a</sup>R<sup>a</sup>, -NR<sup>a</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>a</sup>-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup> or -NR<sup>a</sup>-C<sub>1-6</sub>alkylOR<sup>a</sup>; or R<sup>7</sup>

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and R<sup>8</sup> together are a saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected from O, N and S with the remaining atoms being carbon, so long as the combination of O and S atoms is not greater than 2, wherein the carbon atoms of the bridge are substituted by 0, 1, 2 or 3 substituents selected

5 from halo, C<sub>1-6</sub>alkyl, (=O), -O-C<sub>1-6</sub>alkyl, -NR<sup>a</sup>C<sub>1-6</sub>alkyl, -C<sub>1-6</sub>alkylOR<sup>a</sup> and C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, and the available N atoms of the bridge are substituted by R<sup>a</sup>, -C<sub>1-6</sub>alkylOR<sup>a</sup> or C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>;

R<sup>9</sup> is independently, at each instance, H, C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OC<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -O-C<sub>1-6</sub>alkylOR<sup>a</sup>,

10 -NR<sup>a</sup>R<sup>a</sup>, -NR<sup>a</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>a</sup>-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup> or -NR<sup>a</sup>-C<sub>1-6</sub>alkylOR<sup>a</sup>;

R<sup>10</sup> is independently, at each instance, H, C<sub>1-9</sub>alkyl, -C<sub>1-3</sub>alkylOR<sup>a</sup>, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OR<sup>a</sup>, -S(=O)<sub>n</sub>C<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -O-C<sub>1-6</sub>alkylOR<sup>a</sup>, -O-C<sub>1-6</sub>alkylC(=O)OR<sup>a</sup>, -NR<sup>a</sup>R<sup>a</sup>,

15 -NR<sup>a</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>a</sup>-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -NR<sup>a</sup>-C<sub>1-6</sub>alkylOR<sup>a</sup>, -C(=O)C<sub>1-6</sub>alkyl, -C(=O)OC<sub>1-6</sub>alkyl, -OC(=O)C<sub>1-6</sub>alkyl, -C(=O)NR<sup>a</sup>C<sub>1-6</sub>alkyl or -NR<sup>a</sup>C(=O)C<sub>1-6</sub>alkyl;

R<sup>11</sup> is independently, at each instance, H, C<sub>1-9</sub>alkyl, -C<sub>1-3</sub>alkylOR<sup>a</sup>, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OR<sup>a</sup>, -S(=O)<sub>n</sub>C<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -O-C<sub>1-6</sub>alkylOR<sup>a</sup>, -O-C<sub>1-6</sub>alkylC(=O)OR<sup>a</sup>,

20 -NR<sup>a</sup>R<sup>a</sup>, -NR<sup>a</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>a</sup>-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -NR<sup>a</sup>-C<sub>1-6</sub>alkylOR<sup>a</sup>, -C(=O)C<sub>1-6</sub>alkyl, -C(=O)OC<sub>1-6</sub>alkyl, -OC(=O)C<sub>1-6</sub>alkyl, -C(=O)NR<sup>a</sup>C<sub>1-6</sub>alkyl or -NR<sup>a</sup>C(=O)C<sub>1-6</sub>alkyl; or R<sup>10</sup> and R<sup>11</sup> together are a saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected from O, N and S with the remaining atoms being carbon, so long as the combination of O and S atoms is not

25 greater than 2, wherein the each of the carbon atoms in the bridge is substituted by H, =O, -OR<sup>a</sup>, -C<sub>1-6</sub>alkylOR<sup>a</sup>, -C<sub>1-6</sub>alkyl, -NR<sup>a</sup>R<sup>a</sup>, -C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -C(=O)OR<sup>a</sup>, -C(=O)NR<sup>a</sup>R<sup>a</sup>, -C<sub>1-3</sub>alkylC(=O)OR<sup>a</sup>, -C<sub>1-3</sub>alkylC(=O)NR<sup>a</sup>R<sup>a</sup>, -OC(=O)C<sub>1-6</sub>alkyl, -NR<sup>a</sup>C(=O)C<sub>1-6</sub>alkyl, -C<sub>1-3</sub>alkylOC(=O)C<sub>1-6</sub>alkyl or -C<sub>1-3</sub>alkylNR<sup>a</sup>C(=O)C<sub>1-6</sub>alkyl, and any nitrogen atoms in the bridge are substituted by H, -C<sub>1-6</sub>alkylOR<sup>a</sup>,

30 -C<sub>1-6</sub>alkyl, -C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -C<sub>1-3</sub>alkylC(=O)OR<sup>a</sup>, -C<sub>1-3</sub>alkylC(=O)NR<sup>a</sup>R<sup>a</sup>, -C<sub>1-3</sub>alkylOC(=O)C<sub>1-6</sub>alkyl, -C<sub>1-3</sub>alkylNR<sup>a</sup>C(=O)C<sub>1-6</sub>alkyl, -C(=O)R<sup>c</sup> or

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- C<sub>1-3</sub>alkylR<sup>c</sup>; wherein if R<sup>10</sup>, R<sup>12</sup>, R<sup>13</sup> and R<sup>14</sup> are all H, then R<sup>11</sup> is not
  - O-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup> or -O-C<sub>1-6</sub>alkylOR<sup>a</sup>;
  - R<sup>12</sup> is independently, at each instance, H, C<sub>1-9</sub>alkyl, -C<sub>1-3</sub>alkylOR<sup>a</sup>, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OR<sup>a</sup>, -S(=O)<sub>n</sub>C<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl,
  - 5 -O-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -O-C<sub>1-6</sub>alkylOR<sup>a</sup>, -O-C<sub>1-6</sub>alkylC(=O)OR<sup>a</sup>, -NR<sup>a</sup>R<sup>a</sup>, -NR<sup>a</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>a</sup>-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -NR<sup>a</sup>-C<sub>1-6</sub>alkylOR<sup>a</sup>, -C(=O)C<sub>1-6</sub>alkyl, -C(=O)OC<sub>1-6</sub>alkyl, -OC(=O)C<sub>1-6</sub>alkyl, -C(=O)NR<sup>a</sup>C<sub>1-6</sub>alkyl or -NR<sup>a</sup>C(=O)C<sub>1-6</sub>alkyl; or R<sup>11</sup> and R<sup>12</sup> together are a saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected from O, N and S with the
  - 10 remaining atoms being carbon, so long as the combination of O and S atoms is not greater than 2, wherein the each of the carbon atoms in the bridge is substituted by H, =O, -OR<sup>a</sup>, -C<sub>1-6</sub>alkylOR<sup>a</sup>, -C<sub>1-6</sub>alkyl, -NR<sup>a</sup>R<sup>a</sup>, -C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -C(=O)OR<sup>a</sup>, -C(=O)NR<sup>a</sup>R<sup>a</sup>, -C<sub>1-3</sub>alkylC(=O)OR<sup>a</sup>, -C<sub>1-3</sub>alkylC(=O)NR<sup>a</sup>R<sup>a</sup>, -OC(=O)C<sub>1-6</sub>alkyl, -NR<sup>a</sup>C(=O)C<sub>1-6</sub>alkyl, -C<sub>1-3</sub>alkylOC(=O)C<sub>1-6</sub>alkyl or -C<sub>1-3</sub>alkylNR<sup>a</sup>C(=O)C<sub>1-6</sub>alkyl, and any nitrogen atoms in the bridge are substituted by H, -C<sub>1-6</sub>alkylOR<sup>a</sup>, -C<sub>1-6</sub>alkyl, -C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -C<sub>1-3</sub>alkylC(=O)OR<sup>a</sup>, -C<sub>1-3</sub>alkylC(=O)NR<sup>a</sup>R<sup>a</sup>, -C<sub>1-3</sub>alkylOC(=O)C<sub>1-6</sub>alkyl, -C<sub>1-3</sub>alkylNR<sup>a</sup>C(=O)C<sub>1-6</sub>alkyl, -C(=O)R<sup>c</sup> or -C<sub>1-3</sub>alkylR<sup>c</sup>;
  - 15 when R<sup>1</sup> is 4-C<sub>1-6</sub>alkylphenyl or 2,4-dimethylphenyl, then R<sup>11</sup> is C<sub>1-9</sub>alkyl,
  - 20 C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OR<sup>a</sup>, -S(=O)<sub>n</sub>C<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -O-C<sub>1-6</sub>alkylR<sup>c</sup>, -O-C<sub>1-6</sub>alkylOR<sup>a</sup>, -O-C<sub>1-6</sub>alkylC(=O)OR<sup>a</sup>, -NR<sup>a</sup>R<sup>a</sup>, -NR<sup>a</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>a</sup>-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -NR<sup>a</sup>-C<sub>1-6</sub>alkylOR<sup>a</sup>, -C(=O)C<sub>1-6</sub>alkyl, -C(=O)OC<sub>1-6</sub>alkyl, -OC(=O)C<sub>1-6</sub>alkyl, -C(=O)NR<sup>a</sup>C<sub>1-6</sub>alkyl or -NR<sup>a</sup>C(=O)C<sub>1-6</sub>alkyl; or R<sup>10</sup> and R<sup>11</sup> together are -L<sup>3</sup>-NR<sup>a</sup>- or R<sup>10</sup> and R<sup>11</sup> together are -L<sup>4</sup>-O-, respectively, or
  - 25 -L<sup>4</sup>-O-, respectively; or R<sup>11</sup> and R<sup>12</sup> are -NR<sup>a</sup>-L<sup>3</sup>-, -L<sup>3</sup>-NR<sup>a</sup>-, -O-L<sup>4</sup>- or -L<sup>4</sup>-O-; or R<sup>12</sup> is -NR<sup>a</sup>R<sup>b</sup>; or R<sup>4</sup> is 10-membered bicyclic ring comprising fused 6-membered rings, containing 0, 1, 2, 3 or 4 N atoms with the remainder being carbon atoms, with at least one of the 6-membered rings being aromatic, wherein the carbon atoms are substituted by H, halo, OR<sup>a</sup>, NR<sup>a</sup>R<sup>a</sup>, C<sub>1-6</sub>alkyl and C<sub>1-3</sub>haloalkyl; and
  - 30 saturated carbon atoms may be additionally substituted by =O; or R<sup>4</sup> is a saturated or unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 atoms selected from O, N and S that is optionally vicinally fused with a saturated or

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unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected from O, N and S with the remaining atoms being carbon, so long as the combination of O and S atoms is not greater than 2, wherein the carbon atoms of the heterocycle and bridge are substituted by 1, 2 or 3 substituents independently selected from

5      C<sub>2-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OR<sup>a</sup>, -S(=O)<sub>n</sub>C<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -O-C<sub>1-6</sub>alkylOR<sup>a</sup>, -O-C<sub>1-6</sub>alkylC(=O)OR<sup>a</sup>, -NR<sup>a</sup>R<sup>a</sup>, -NR<sup>a</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>a</sup>-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -NR<sup>a</sup>-C<sub>1-6</sub>alkylOR<sup>a</sup>, -C(=O)C<sub>1-6</sub>alkyl, -C(=O)OC<sub>1-6</sub>alkyl, -OC(=O)C<sub>1-6</sub>alkyl, -C(=O)NR<sup>a</sup>C<sub>1-6</sub>alkyl and -NR<sup>a</sup>C(=O)C<sub>1-6</sub>alkyl;

10     R<sup>13</sup> is independently, at each instance, H, C<sub>1-9</sub>alkyl, -C<sub>1-3</sub>alkylOR<sup>a</sup>, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OR<sup>a</sup>, -S(=O)<sub>n</sub>C<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -O-C<sub>1-6</sub>alkylOR<sup>a</sup>, -O-C<sub>1-6</sub>alkylC(=O)OR<sup>a</sup>, -NR<sup>a</sup>R<sup>a</sup>, -NR<sup>a</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>a</sup>-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -NR<sup>a</sup>-C<sub>1-6</sub>alkylOR<sup>a</sup>, -C(=O)C<sub>1-6</sub>alkyl, -C(=O)OC<sub>1-6</sub>alkyl, -OC(=O)C<sub>1-6</sub>alkyl, -C(=O)NR<sup>a</sup>C<sub>1-6</sub>alkyl or -NR<sup>a</sup>C(=O)C<sub>1-6</sub>alkyl;

15     R<sup>14</sup> is independently, at each instance, H, C<sub>1-9</sub>alkyl, -C<sub>1-3</sub>alkylOR<sup>a</sup>, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OR<sup>a</sup>, -S(=O)<sub>n</sub>C<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -O-C<sub>1-6</sub>alkylOR<sup>a</sup>, -O-C<sub>1-6</sub>alkylC(=O)OR<sup>a</sup>, -NR<sup>a</sup>R<sup>a</sup>, -NR<sup>a</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>a</sup>-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -NR<sup>a</sup>-C<sub>1-6</sub>alkylOR<sup>a</sup>, -C(=O)C<sub>1-6</sub>alkyl, -C(=O)OC<sub>1-6</sub>alkyl, -OC(=O)C<sub>1-6</sub>alkyl, -C(=O)NR<sup>a</sup>C<sub>1-6</sub>alkyl or -NR<sup>a</sup>C(=O)C<sub>1-6</sub>alkyl;

20     R<sup>a</sup> is independently, at each instance, H, phenyl, benzyl or C<sub>1-6</sub>alkyl; R<sup>b</sup> is H, C<sub>1-6</sub>alkyl, -C(=O)C<sub>1-6</sub>alkyl, C<sub>1-6</sub>alkyl-O-R<sup>a</sup>; R<sup>c</sup> is phenyl substituted by 0, 1 or 2 groups selected from halo, 25 C<sub>1-3</sub>haloalkyl, -OR<sup>a</sup> and -NR<sup>a</sup>R<sup>a</sup>; or R<sup>c</sup> is a saturated or unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 heteroatoms independently selected from N, O and S, wherein no more than 2 of the ring members are O or S, wherein the heterocycle is optionally fused with a phenyl ring, and the carbon atoms of the heterocycle are substituted by 0, 1 or 2 oxo groups, wherein the 30 heterocycle or fused phenyl ring is substituted by 0, 1, 2 or 3 substituents selected from halo, C<sub>1-3</sub>haloalkyl, -OR<sup>a</sup> and -NR<sup>a</sup>R<sup>a</sup>;

L<sup>1</sup> is a bond, -CH<sub>2</sub>CH<sub>2</sub>- or -CH=CH-;

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$L^2$  is  $NR^a$ ,  $O$ ,  $S(=O)_n$ ,  $-N=CH-$ ,  $-CH_2NR^a-$ ,  $-CH=N-$  or  $-NR^aCH_2-$ ;

$L^3$  is a 2- or 3-atom, saturated or unsaturated, bridge containing 1, 2 or 3

carbon atoms and 0, 1 or 2 atoms independently selected from O, N and S,

wherein the each of the carbon atoms in the bridge is substituted by H,  $=O$ ,  $-OR^a$ ,

- 5     $-C_{1-6}alkylOR^a$ ,  $-C_{1-6}alkyl$ ,  $-NR^aR^a$ ,  $-C_{1-6}alkylNR^aR^a$ ,  $-C(=O)OR^a$ ,  $-C(=O)NR^aR^a$ ,  
 $-C_{1-3}alkylC(=O)OR^a$ ,  $-C_{1-3}alkylC(=O)NR^aR^a$ ,  $-OC(=O)C_{1-6}alkyl$ ,  
 $-NR^aC(=O)C_{1-6}alkyl$ ,  $-C_{1-3}alkylOC(=O)C_{1-6}alkyl$  or  $-C_{1-3}alkylNR^aC(=O)C_{1-6}alkyl$ ,  
and any nitrogen atoms in the bridge are substituted by H,  $-C_{1-6}alkylOR^a$ ,  
 $-C_{1-6}alkyl$ ,  $-C_{1-6}alkylNR^aR^a$ ,  $-C_{1-3}alkylC(=O)OR^a$ ,  $-C_{1-3}alkylC(=O)NR^aR^a$ ,
- 10    $-C_{1-3}alkylOC(=O)C_{1-6}alkyl$ ,  $-C_{1-3}alkylNR^aC(=O)C_{1-6}alkyl$ ,  $-C(=O)R^c$  or  
 $-C_{1-3}alkylR^c$ ;

$L^4$  is a 2- or 3-atom, saturated or unsaturated, bridge containing 1, 2 or 3 carbon atoms and 0 or 1 atoms independently selected from O, N and S, wherein at least one of the carbon atoms in the bridge is substituted by  $=O$ ,  $-OR^a$ ,

- 15    $-C_{1-6}alkylOR^a$ ,  $-C_{1-6}alkyl$ ,  $-NR^aR^a$ ,  $-C_{1-6}alkylNR^aR^a$ ,  $-C(=O)OC_{1-6}alkyl$ ,  
 $-C(=O)NR^aR^a$ ,  $-C_{1-3}alkylC(=O)OR^a$ ,  $-C_{1-3}alkylC(=O)NR^aC_{1-6}alkyl$ ,  
 $-OC(=O)C_{1-6}alkyl$ ,  $-NR^aC(=O)C_{1-6}alkyl$ ,  $-C_{1-3}alkylOC(=O)C_{1-6}alkyl$  or  
 $-C_{1-3}alkylNR^aC(=O)C_{1-6}alkyl$ , and any nitrogen atoms in the bridge are substituted by H,  $-C_{1-6}alkylOR^a$ ,  $-C_{1-6}alkyl$ ,  $-C_{1-6}alkylNR^aR^a$ ,  $-C_{1-3}alkylC(=O)OR^a$ ,
- 20    $-C_{1-3}alkylC(=O)NR^aR^a$ ,  $-C_{1-3}alkylOC(=O)C_{1-6}alkyl$ ,  $-C_{1-3}alkylNR^aC(=O)C_{1-6}alkyl$ ,  
 $-C(=O)R^c$  or  $-C_{1-3}alkylR^c$ ;

$X$  is O, S or  $NR^a$ ; or  $X$  and  $R^2$  together are  $=N-CH=CH-$ ,  $=C-O-$ ,  $=C-S-$ , or  $=C-NR^a-$ ;

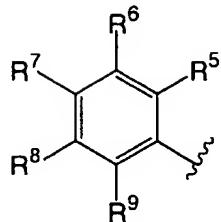
$Y$  is NH or O; and

- 25    $n$  is independently, at each instance, 0, 1 or 2; with the proviso that when  $R^1$  is 4-chlorophenyl, then  $R^4$  is not 3-methoxyphenyl.

2.      A compound according to Claim 1, wherein:

$R^1$  is

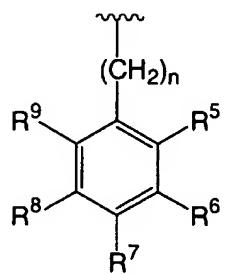
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or a naphthyl or saturated or unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 heteroatoms independently selected from N, O and S, wherein no more than 2 of the ring members are O or S, wherein the heterocycle is

5 optionally fused with a phenyl ring, and the naphthyl, heterocycle or fused phenyl ring is substituted by 0, 1, 2 or 3 substituents independently selected from R<sup>5</sup>, R<sup>6</sup> and R<sup>7</sup>;

R<sup>2</sup> is H, hydroxy, halo, C<sub>1-6</sub>alkyl substituted by 0, 1 or 2 substituents selected from R<sup>10</sup>,



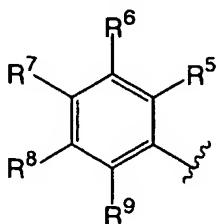
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or a saturated or unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 heteroatoms independently selected from N, O and S, wherein no more than 2 of the ring members are O or S, wherein the heterocycle is optionally fused with a phenyl ring, and the heterocycle or fused phenyl ring is substituted by 0, 1, 2 or 3 substituents independently selected from R<sup>5</sup>, R<sup>6</sup> and R<sup>7</sup>; and

15

R<sup>3</sup> is H or C<sub>1-4</sub>alkyl.

3. A compound according to Claim 1, wherein R<sup>1</sup> is



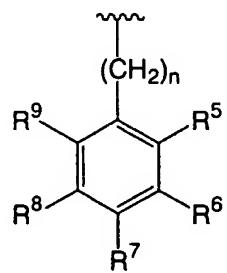
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4. A compound according to Claim 3, wherein R<sup>7</sup> is independently, at each instance, C<sub>2-9</sub>alkyl or C<sub>1-4</sub>haloalkyl.

5 5. A compound according to Claim 1, wherein R<sup>1</sup> is a saturated or unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 heteroatoms independently selected from N, O and S, wherein no more than 2 of the ring members are O or S, wherein the heterocycle is optionally fused with a phenyl ring, and the heterocycle or fused phenyl ring is substituted by 0, 1, 2 or 3  
10 substituents independently selected from R<sup>5</sup>, R<sup>6</sup> and R<sup>7</sup>.

15 6. A compound according to Claim 5, wherein R<sup>2</sup> is a saturated or unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 heteroatoms independently selected from N, O and S, wherein no more than 2 of the ring members are O or S, wherein the heterocycle is optionally fused with a phenyl ring, and the heterocycle or fused phenyl ring is substituted by 0, 1, 2 or 3  
20 substituents independently selected from R<sup>5</sup>, R<sup>6</sup> and R<sup>7</sup>.

7. A compound according to Claim 2, wherein R<sup>2</sup> is

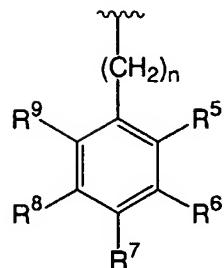


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or a saturated or unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 heteroatoms independently selected from N, O and S, wherein no more than 2 of the ring members are O or S, wherein the heterocycle is optionally fused with a phenyl ring, and the heterocycle or fused phenyl ring is substituted by 0, 1, 2 or 3  
25 substituents independently selected from R<sup>5</sup>, R<sup>6</sup> and R<sup>7</sup>.

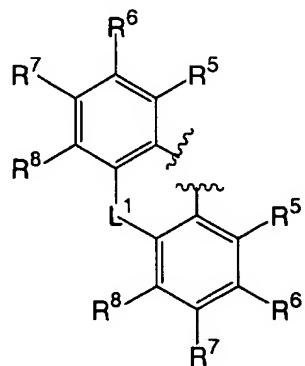
8. A compound according to Claim 7, wherein R<sup>2</sup> is

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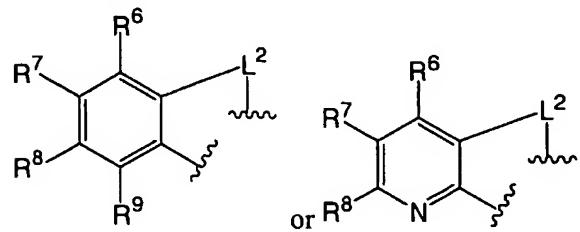


9. A compound according to Claim 7, wherein R<sup>2</sup> is a saturated or unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 heteroatoms independently selected from N, O and S, wherein no more than 2 of the ring members are O or S, wherein the heterocycle is optionally fused with a phenyl ring, and the heterocycle or fused phenyl ring is substituted by 0, 1, 2 or 3 substituents independently selected from R<sup>5</sup>, R<sup>6</sup> and R<sup>7</sup>.

10. A compound according to Claim 2, wherein R<sup>1</sup> and R<sup>2</sup> together are



11. A compound according to Claim 2, wherein R<sup>1</sup> and R<sup>3</sup> together are

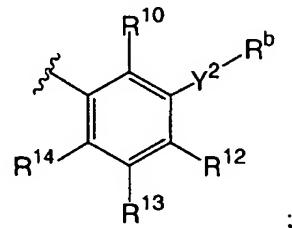


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12. A compound according to Claim 2, wherein X and R<sup>2</sup> together are =N-CH=CH-, =C-O-, =C-S-, or =C-NR<sup>a</sup>-.

13. A compound according to any one of Claims 2, 4, 5, 8 or 9,  
5 wherein:

R<sup>4</sup> is

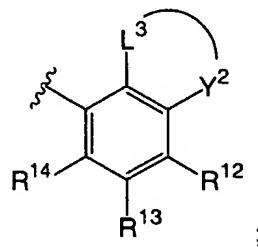


R<sup>b</sup> is H, C<sub>1-6</sub>alkyl, -C(=O)C<sub>1-6</sub>alkyl, C<sub>1-6</sub>alkyl-O-R<sup>a</sup>; and  
Y<sup>2</sup> is -NR<sup>a</sup>- or -O-.

10

14. A compound according to any one of Claims 2, 4, 5, 8 or 9,  
wherein:

R<sup>4</sup> is



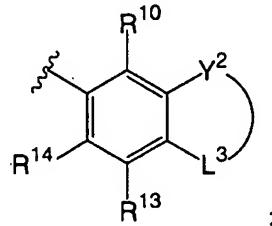
15 L<sup>3</sup> is a 2- or 3-atom, saturated or unsaturated, bridge containing 1, 2 or 3 carbon atoms and 0 or 1 atoms independently selected from O, N and S, wherein the each of the carbon atoms in the bridge is substituted by H, =O, -OR<sup>a</sup>, -C<sub>1-6</sub>alkylOR<sup>a</sup>, -C<sub>1-6</sub>alkyl, -NR<sup>a</sup>R<sup>a</sup>, -C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -C(=O)OR<sup>a</sup>, -C(=O)NR<sup>a</sup>R<sup>a</sup>, -C<sub>1-3</sub>alkylC(=O)OR<sup>a</sup>, -C<sub>1-3</sub>alkylC(=O)NR<sup>a</sup>R<sup>a</sup>, -OC(=O)C<sub>1-6</sub>alkyl,  
20 -NR<sup>a</sup>C(=O)C<sub>1-6</sub>alkyl, -C<sub>1-3</sub>alkylOC(=O)C<sub>1-6</sub>alkyl or -C<sub>1-3</sub>alkylNR<sup>a</sup>C(=O)C<sub>1-6</sub>alkyl, and any nitrogen atoms in the bridge are substituted by H, -C<sub>1-6</sub>alkylOR<sup>a</sup>, -C<sub>1-6</sub>alkyl, -C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -C<sub>1-3</sub>alkylC(=O)OR<sup>a</sup>, -C<sub>1-3</sub>alkylC(=O)NR<sup>a</sup>R<sup>a</sup>, -C<sub>1-3</sub>alkylOC(=O)C<sub>1-6</sub>alkyl, -C<sub>1-3</sub>alkylNR<sup>a</sup>C(=O)C<sub>1-6</sub>alkyl, -C(=O)R<sup>c</sup> or -C<sub>1-3</sub>alkylR<sup>c</sup>;

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$R^b$  is H,  $C_{1-6}$ alkyl,  $-C(=O)C_{1-6}$ alkyl,  $C_{1-6}$ alkyl-O-R<sup>a</sup>; and  
 $Y^2$  is  $-NR^b-$  or  $-O-$ .

15. A compound according to any one of Claims 2, 4, 5, 8 or 9,  
5 wherein:

$R^4$  is

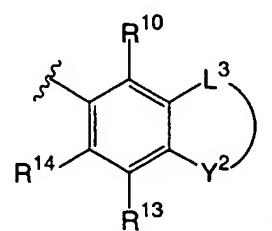


$L^3$  is a 2- or 3-atom, saturated or unsaturated, bridge containing 1, 2 or 3 carbon atoms and 0, 1 or 2 atoms independently selected from O, N and S,  
10 wherein the each of the carbon atoms in the bridge is substituted by H, =O, -OR<sup>a</sup>,  $-C_{1-6}$ alkylOR<sup>a</sup>,  $-C_{1-6}$ alkyl,  $-NR^aR^a$ ,  $-C_{1-6}$ alkylNR<sup>a</sup>R<sup>a</sup>,  $-C(=O)OR^a$ ,  $-C(=O)NR^aR^a$ ,  $-C_{1-3}$ alkylC(=O)OR<sup>a</sup>,  $-C_{1-3}$ alkylC(=O)NR<sup>a</sup>R<sup>a</sup>,  $-OC(=O)C_{1-6}$ alkyl,  $-NR^aC(=O)C_{1-6}$ alkyl,  $-C_{1-3}$ alkylOC(=O)C<sub>1-6</sub>alkyl or  $-C_{1-3}$ alkylNR<sup>a</sup>C(=O)C<sub>1-6</sub>alkyl, and any nitrogen atoms in the bridge are substituted by H,  $-C_{1-6}$ alkylOR<sup>a</sup>,  
15  $-C_{1-6}$ alkyl,  $-C_{1-6}$ alkylNR<sup>a</sup>R<sup>a</sup>,  $-C_{1-3}$ alkylC(=O)OR<sup>a</sup>,  $-C_{1-3}$ alkylC(=O)NR<sup>a</sup>R<sup>a</sup>,  $-C_{1-3}$ alkylOC(=O)C<sub>1-6</sub>alkyl,  $-C_{1-3}$ alkylNR<sup>a</sup>C(=O)C<sub>1-6</sub>alkyl,  $-C(=O)R^c$  or  $-C_{1-3}$ alkylR<sup>c</sup>;

$R^b$  is H,  $C_{1-6}$ alkyl,  $-C(=O)C_{1-6}$ alkyl,  $C_{1-6}$ alkyl-O-R<sup>a</sup>; and  
 $Y^2$  is  $-NR^b-$  or  $-O-$ .

20  
16. A compound according to any one of Claims 2, 4, 5, 8 or 9,  
wherein:

$R^4$  is



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$L^3$  is a 2- or 3-atom, saturated or unsaturated, bridge containing 1, 2 or 3 carbon atoms and 0, 1 or 2 atoms independently selected from O, N and S, wherein the each of the carbon atoms in the bridge is substituted by H, =O, -OR<sup>a</sup>, -C<sub>1-6</sub>alkylOR<sup>a</sup>, -C<sub>1-6</sub>alkyl, -NR<sup>a</sup>R<sup>a</sup>, -C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -C(=O)OR<sup>a</sup>, -C(=O)NR<sup>a</sup>R<sup>a</sup>,

5 -C<sub>1-3</sub>alkylC(=O)OR<sup>a</sup>, -C<sub>1-3</sub>alkylC(=O)NR<sup>a</sup>R<sup>a</sup>, -OC(=O)C<sub>1-6</sub>alkyl,

-NR<sup>a</sup>C(=O)C<sub>1-6</sub>alkyl, -C<sub>1-3</sub>alkylOC(=O)C<sub>1-6</sub>alkyl or -C<sub>1-3</sub>alkylNR<sup>a</sup>C(=O)C<sub>1-6</sub>alkyl, and any nitrogen atoms in the bridge are substituted by H, -C<sub>1-6</sub>alkylOR<sup>a</sup>, -C<sub>1-6</sub>alkyl, -C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -C<sub>1-3</sub>alkylC(=O)OR<sup>a</sup>, -C<sub>1-3</sub>alkylC(=O)NR<sup>a</sup>R<sup>a</sup>,

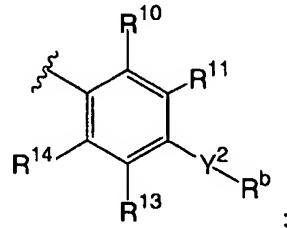
10 -C<sub>1-3</sub>alkylOC(=O)C<sub>1-6</sub>alkyl, -C<sub>1-3</sub>alkylNR<sup>a</sup>C(=O)C<sub>1-6</sub>alkyl, -C(=O)R<sup>c</sup> or -C<sub>1-3</sub>alkylR<sup>c</sup>;

R<sup>b</sup> is H, C<sub>1-6</sub>alkyl, -C(=O)C<sub>1-6</sub>alkyl, C<sub>1-6</sub>alkyl-O-R<sup>a</sup>; and

Y<sup>2</sup> is -NR<sup>b</sup>- or -O-.

17. A compound according to any one of Claims 2, 4, 5, 8 or 9,  
15 wherein:

R<sup>4</sup> is



R<sup>b</sup> is H, C<sub>1-6</sub>alkyl, -C(=O)C<sub>1-6</sub>alkyl, C<sub>1-6</sub>alkyl-O-R<sup>a</sup>; and  
Y<sup>2</sup> is -NR<sup>a</sup>- or -O-.

20

18. A compound according to any one of Claims 2, 4, 5, 8 or 9,  
wherein:

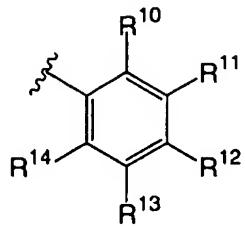
R<sup>4</sup> is 10-membered bicyclic ring comprising fused 6-membered rings, containing 0, 1, 2, 3 or 4 N atoms with the remainder being carbon atoms, with at least one of the 6-membered rings being aromatic, wherein the carbon atoms are substituted by H, halo, OR<sup>a</sup>, NR<sup>a</sup>R<sup>a</sup>, C<sub>1-6</sub>alkyl and C<sub>1-3</sub>haloalkyl; and saturated carbon atoms may be additionally substituted by =O.

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19. A compound according to any one of Claims 2, 4, 5, 8 or 9,

wherein:

$R^4$  is



5         $R^{10}$  is independently, at each instance, H, C<sub>1-9</sub>alkyl, -C<sub>1-3</sub>alkylOR<sup>a</sup>, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OR<sup>a</sup>, -S(=O)<sub>n</sub>C<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -O-C<sub>1-6</sub>alkylOR<sup>a</sup>, -O-C<sub>1-6</sub>alkylC(=O)OR<sup>a</sup>, -NR<sup>a</sup>R<sup>a</sup>, -NR<sup>a</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>a</sup>-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -NR<sup>a</sup>-C<sub>1-6</sub>alkylOR<sup>a</sup>, -C(=O)C<sub>1-6</sub>alkyl, -C(=O)OC<sub>1-6</sub>alkyl, -OC(=O)C<sub>1-6</sub>alkyl, -C(=O)NR<sup>a</sup>C<sub>1-6</sub>alkyl or  
10 -NR<sup>a</sup>C(=O)C<sub>1-6</sub>alkyl;

$R^{11}$  is independently, at each instance, H, C<sub>1-9</sub>alkyl, -C<sub>1-3</sub>alkylOR<sup>a</sup>, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OR<sup>a</sup>, -S(=O)<sub>n</sub>C<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -O-C<sub>1-6</sub>alkylR<sup>c</sup>, -O-C<sub>1-6</sub>alkylOR<sup>a</sup>, -O-C<sub>1-6</sub>alkylC(=O)OR<sup>a</sup>, -NR<sup>a</sup>R<sup>a</sup>, -NR<sup>a</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>a</sup>-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -NR<sup>a</sup>-C<sub>1-6</sub>alkylOR<sup>a</sup>,  
15 -C(=O)C<sub>1-6</sub>alkyl, -C(=O)OC<sub>1-6</sub>alkyl, -OC(=O)C<sub>1-6</sub>alkyl, -C(=O)NR<sup>a</sup>C<sub>1-6</sub>alkyl or -NR<sup>a</sup>C(=O)C<sub>1-6</sub>alkyl;  
      C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>;

$R^{12}$  is independently, at each instance, H, C<sub>1-9</sub>alkyl, -C<sub>1-3</sub>alkylOR<sup>a</sup>, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OR<sup>a</sup>, -S(=O)<sub>n</sub>C<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -O-C<sub>1-6</sub>alkylOR<sup>a</sup>, -O-C<sub>1-6</sub>alkylC(=O)OR<sup>a</sup>, -NR<sup>a</sup>R<sup>a</sup>, -NR<sup>a</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>a</sup>-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -NR<sup>a</sup>-C<sub>1-6</sub>alkylOR<sup>a</sup>, -C(=O)C<sub>1-6</sub>alkyl, -C(=O)OC<sub>1-6</sub>alkyl, -OC(=O)C<sub>1-6</sub>alkyl, -C(=O)NR<sup>a</sup>C<sub>1-6</sub>alkyl or -NR<sup>a</sup>C(=O)C<sub>1-6</sub>alkyl;

$R^{13}$  is independently, at each instance, H, C<sub>1-9</sub>alkyl, -C<sub>1-3</sub>alkylOR<sup>a</sup>, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OR<sup>a</sup>, -S(=O)<sub>n</sub>C<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -O-C<sub>1-6</sub>alkylOR<sup>a</sup>, -O-C<sub>1-6</sub>alkylC(=O)OR<sup>a</sup>, -NR<sup>a</sup>R<sup>a</sup>, -NR<sup>a</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>a</sup>-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -NR<sup>a</sup>-C<sub>1-6</sub>alkylOR<sup>a</sup>, -C(=O)C<sub>1-6</sub>alkyl,

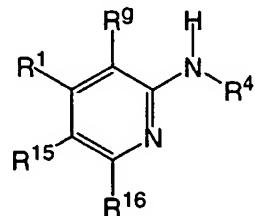
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-C(=O)OC<sub>1-6</sub>alkyl, -OC(=O)C<sub>1-6</sub>alkyl, -C(=O)NR<sup>a</sup>C<sub>1-6</sub>alkyl or  
-NR<sup>a</sup>C(=O)C<sub>1-6</sub>alkyl; and

R<sup>14</sup> is independently, at each instance, H, C<sub>1-9</sub>alkyl, -C<sub>1-3</sub>alkylOR<sup>a</sup>,  
C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OR<sup>a</sup>, -S(=O)<sub>n</sub>C<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl,  
5 -O-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -O-C<sub>1-6</sub>alkylOR<sup>a</sup>, -O-C<sub>1-6</sub>alkylC(=O)OR<sup>a</sup>, -NR<sup>a</sup>R<sup>a</sup>,  
-NR<sup>a</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>a</sup>-C<sub>1-6</sub>alkylNR<sup>a</sup>R<sup>a</sup>, -NR<sup>a</sup>-C<sub>1-6</sub>alkylOR<sup>a</sup>, -C(=O)C<sub>1-6</sub>alkyl,  
-C(=O)OC<sub>1-6</sub>alkyl, -OC(=O)C<sub>1-6</sub>alkyl, -C(=O)NR<sup>a</sup>C<sub>1-6</sub>alkyl or  
-NR<sup>a</sup>C(=O)C<sub>1-6</sub>alkyl; wherein one of R<sup>10</sup> and R<sup>12</sup> is not H.

10 20. A compound according to any one of Claims 2, 4, 5, 8 or 9,  
wherein R<sup>4</sup> is a saturated or unsaturated 5- or 6-membered ring heterocycle  
containing 1, 2 or 3 heteroatoms independently selected from N, O and S, wherein  
no more than 2 of the ring members are O or S, wherein the heterocycle is  
optionally fused with a phenyl ring, and the heterocycle or fused phenyl ring is  
15 substituted by 0, 1, 2 or 3 substituents selected from halo, C<sub>1-4</sub>haloalkyl, -OR<sup>a</sup> and  
-NR<sup>a</sup>R<sup>a</sup>.

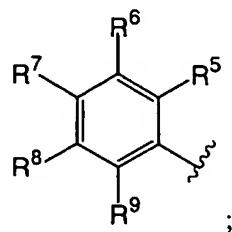
21. A compound having the structure:



20 or any pharmaceutically-acceptable salt thereof, wherein:

n is independently, at each instance, 0, 1 or 2.

R<sup>1</sup> is



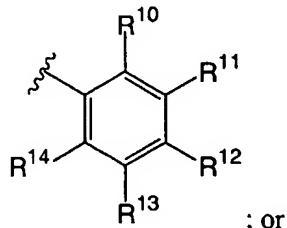
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or R<sup>1</sup> is a naphthyl substituted by 0, 1, 2 or 3 substituents independently selected from R<sup>5</sup>; or R<sup>1</sup> is R<sup>e</sup> substituted by 1, 2 or 3 substituents independently selected from R<sup>5</sup>;

R<sup>15</sup> is, independently, in each instance, R<sup>10</sup>, C<sub>1-8</sub>alkyl substituted by 0, 1 or 5 2 substituents selected from R<sup>10</sup>, -(CH<sub>2</sub>)<sub>n</sub>phenyl substituted by 0, 1, 2 or 3 substituents independently selected from R<sup>10</sup>, or a saturated or unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 heteroatoms independently selected from N, O and S, wherein no more than 2 of the ring members are O or S, wherein the heterocycle is optionally fused with a phenyl ring, and the heterocycle 10 or fused phenyl ring is substituted by 0, 1, 2 or 3 substituents independently selected from R<sup>10</sup>;

R<sup>16</sup> is, independently, in each instance, H, halo, -NH<sub>2</sub>, -NHC<sub>1-3</sub>alkyl, -N(C<sub>1-3</sub>alkyl)C<sub>1-3</sub>alkyl or C<sub>1-3</sub>alkyl;

R<sup>4</sup> is



15 ; or

R<sup>4</sup> is a saturated or unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 atoms selected from O, N and S that is optionally vicinally fused with a saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected from O, N and S with the remaining atoms being carbon, so long as the 20 combination of O and S atoms is not greater than 2, wherein the carbon atoms of the heterocycle and bridge are substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, oxo, -OR<sup>d</sup>, -S(=O)<sub>n</sub>C<sub>1-6</sub>alkyl, -OC<sub>1-4</sub>haloalkyl, -OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -OC<sub>2-6</sub>alkylOR<sup>d</sup>, -OC<sub>1-6</sub>alkylC(=O)OR<sup>d</sup>, -NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>1-4</sub>haloalkyl, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>, -C(=O)C<sub>1-6</sub>alkyl, -C(=O)OC<sub>1-6</sub>alkyl, -OC(=O)C<sub>1-6</sub>alkyl, -C(=O)NR<sup>d</sup>C<sub>1-6</sub>alkyl and -NR<sup>d</sup>C(=O)C<sub>1-6</sub>alkyl; and saturated carbon atoms may be 25 additionally substituted by =O; and any nitrogen atoms in the bridge are substituted by H, -C<sub>1-6</sub>alkylOR<sup>d</sup>, -C<sub>1-6</sub>alkyl, -C<sub>1-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>,

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- $\text{-C}_{1\text{-}3}\text{alkylC(=O)OR}^d$ ,  $\text{-C}_{1\text{-}3}\text{alkylC(=O)NR}^d\text{R}^d$ ,  $\text{-C}_{1\text{-}3}\text{alkyloc(=O)C}_{1\text{-}6}\text{alkyl}$ ,  
 $\text{-C}_{1\text{-}3}\text{alkylNR}^d\text{C(=O)C}_{1\text{-}6}\text{alkyl}$ ,  $\text{-C(=O)R}^f$  or  $\text{-C}_{1\text{-}3}\text{alkylR}^f$ ; or  $\text{R}^4$  is 10-membered  
 bicyclic ring comprising fused 6-membered rings, containing 0, 1, 2, 3 or 4 N  
 atoms with the remainder being carbon atoms, with at least one of the
- 5    6-membered rings being aromatic, wherein the carbon atoms are substituted by H,  
 halo,  $\text{OR}^d$ ,  $\text{NR}^d\text{R}^d$ ,  $\text{C}_{1\text{-}6}\text{alkyl}$  and  $\text{C}_{1\text{-}3}\text{haloalkyl}$ ; and saturated carbon atoms may be  
 additionally substituted by =O; but in no instance is  $\text{R}^4$  3,5-  
 ditrifluoromethylphenyl or 3-trifluoromethyl-4-fluorophenyl;  
 $\text{R}^5$  is independently, at each instance, H,  $\text{C}_{1\text{-}5}\text{alkyl}$ ,  $\text{C}_{1\text{-}4}\text{haloalkyl}$ , halo,  
 nitro, cyano,  $\text{-OC}_{1\text{-}6}\text{alkyl}$ ,  $\text{-OC}_{1\text{-}4}\text{haloalkyl}$ ,  $\text{-OC}_{2\text{-}6}\text{alkylNR}^d\text{R}^d$ ,  $\text{-OC}_{2\text{-}6}\text{alkylOR}^d$ ,  
 $\text{-NR}^d\text{R}^d$ ,  $\text{-NR}^d\text{C}_{1\text{-}4}\text{haloalkyl}$ ,  $\text{-NR}^d\text{C}_{2\text{-}6}\text{alkylNR}^d\text{R}^d$ ,  $\text{-NR}^d\text{C}_{2\text{-}6}\text{alkylOR}^d$ , naphthyl,  
 $\text{-CO}_2(\text{C}_{1\text{-}6}\text{alkyl})$ ,  $\text{-C(=O)(C}_{1\text{-}6}\text{alkyl)}$ ,  $\text{-C(=O)NR}^d\text{R}^d$ ,  $\text{-NR}^d\text{C(=O)R}^d$ ,  
 $\text{-NR}^d\text{C(=O)NR}^d\text{R}^d$ ,  $\text{-NR}^d\text{CO}_2(\text{C}_{1\text{-}6}\text{alkyl})$ ,  $\text{-C}_{1\text{-}8}\text{alkylOR}^d$ ,  $\text{-C}_{1\text{-}6}\text{alkylNR}^d\text{R}^d$ ,  
 $\text{-S(=O)}_n(\text{C}_{1\text{-}6}\text{alkyl})$ ,  $\text{-S(=O)}_2\text{NR}^d\text{R}^d$ ,  $\text{-NR}^d\text{S(=O)}_2(\text{C}_{1\text{-}6}\text{alkyl})$ ,  $\text{-OC(=O)NR}^d\text{R}^d$ , a  
 phenyl ring substituted with 0, 1, 2, or 3 substituents independently selected from  
 $\text{R}^{10}$ ; or  $\text{R}^5$  is a saturated or unsaturated 5- or 6-membered ring heterocycle  
 containing 1, 2 or 3 atoms selected from O, N and S, substituted with 0, 1, 2, or 3  
 substituents independently selected from  $\text{R}^{10}$ ;
- 10     $\text{R}^6$  is independently, at each instance, H,  $\text{C}_{1\text{-}5}\text{alkyl}$ ,  $\text{C}_{1\text{-}4}\text{haloalkyl}$ , halo,  
 $\text{-OC}_{1\text{-}6}\text{alkyl}$ ,  $\text{-OC}_{1\text{-}4}\text{haloalkyl}$ ,  $\text{-OC}_{2\text{-}6}\text{alkylNR}^d\text{R}^d$ ,  $\text{-OC}_{2\text{-}6}\text{alkylOR}^d$ ,  $\text{-NR}^d\text{R}^d$ ,  
 $\text{-NR}^d\text{C}_{1\text{-}4}\text{haloalkyl}$ ,  $\text{-NR}^d\text{C}_{2\text{-}6}\text{alkylNR}^d\text{R}^d$  or  $\text{-NR}^d\text{C}_{2\text{-}6}\text{alkylOR}^d$ ,  $\text{-C}_{1\text{-}8}\text{alkylOR}^d$ ,  
 $\text{-C}_{1\text{-}6}\text{alkylNR}^d\text{R}^d$ ,  $\text{-S(C}_{1\text{-}6}\text{alkyl)}$ , a phenyl ring substituted with 1, 2, or 3  
 substituents independently selected from  $\text{R}^{10}$ ; or  $\text{R}^6$  is a saturated or unsaturated 5-  
 or 6-membered ring heterocycle containing 1, 2 or 3 atoms selected from O, N  
 and S substituted with 0, 1, 2, or 3 substituents independently selected from  $\text{R}^{10}$ ;
- 15     $\text{R}^7$  is independently, at each instance, H,  $\text{C}_{1\text{-}8}\text{alkyl}$ ,  $\text{C}_{1\text{-}4}\text{haloalkyl}$ ,  
 $\text{halo}$ ,  $\text{-OC}_{1\text{-}6}\text{alkyl}$ ,  $\text{-OC}_{1\text{-}4}\text{haloalkyl}$ ,  $\text{-OC}_{2\text{-}6}\text{alkylNR}^d\text{R}^d$ ,  $\text{-OC}_{2\text{-}6}\text{alkylOR}^d$ ,  
 $\text{-NR}^d\text{R}^d$ ,  $\text{-NR}^d\text{C}_{1\text{-}4}\text{haloalkyl}$ ,  $\text{-NR}^d\text{C}_{2\text{-}6}\text{alkylNR}^d\text{R}^d$ ,  $\text{-NR}^d\text{C}_{2\text{-}6}\text{alkylOR}^d$ ,  
 $\text{-C}_{1\text{-}8}\text{alkylOR}^d$ ,  $\text{-C}_{1\text{-}6}\text{alkylNR}^d\text{R}^d$  or  $\text{-S(C}_{1\text{-}6}\text{alkyl)}$ ; or  $\text{R}^7$  is a saturated or  
 unsaturated 4- or 5-membered ring heterocycle containing a single  
 nitrogen atom, wherein the ring is substituted with 0, 1 or 2 substituents  
 independently selected from halo,  $\text{C}_{1\text{-}2}\text{haloalkyl}$  and  $\text{C}_{1\text{-}3}\text{alkyl}$ ;

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$R^8$  is independently, at each instance, H,  $C_{1-5}$ alkyl,  $C_{1-4}$ haloalkyl, halo, - $OC_{1-6}$ alkyl, - $OC_{1-4}$ haloalkyl, - $OC_{2-6}$ alkylNR<sup>d</sup>R<sup>d</sup>, - $OC_{2-6}$ alkylOR<sup>d</sup>, -NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>1-4</sub>haloalkyl, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>, -C<sub>1-8</sub>alkylOR<sup>d</sup>, -S( $C_{1-6}$ alkyl), a phenyl ring substituted with 1, 2, or 3

5 substituents independently selected from  $R^{10}$ , or  $R^8$  is a saturated or unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 atoms selected from O, N and S substituted with 0, 1, 2, or 3 substituents independently selected from  $R^{10}$ ;

$R^9$  is independently, at each instance, H,  $C_{1-8}$ alkyl,  $C_{1-4}$ haloalkyl, halo, nitro, cyano, - $OC_{1-6}$ alkyl, - $OC_{1-4}$ haloalkyl, - $OC_{2-6}$ alkylNR<sup>d</sup>R<sup>d</sup>, - $OC_{2-6}$ alkylOR<sup>d</sup>, -NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>1-4</sub>haloalkyl, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup> or -NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>, -CO<sub>2</sub>( $C_{1-6}$ alkyl), -C(=O)( $C_{1-6}$ alkyl), -C(=O)NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C(=O)( $C_{1-6}$ alkyl), -NR<sup>d</sup>C(=O)NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>CO<sub>2</sub>( $C_{1-6}$ alkyl), -C<sub>1-8</sub>alkylOR<sup>d</sup>, -C<sub>1-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -S(=O)<sub>n</sub>( $C_{1-6}$ alkyl), -S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>S(=O)<sub>2</sub>( $C_{1-6}$ alkyl), -OC(=O)NR<sup>d</sup>R<sup>d</sup>, a phenyl ring substituted with 0, 1, 2, or 3 substituents independently selected from  $R^{10}$ ; or  $R^9$  is a saturated or unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 atoms selected from O, N and S substituted with 0, 1, 2, or 3 substituents independently selected from  $R^{10}$ ; or  $R^9$  is a saturated or unsaturated 4- or 5-membered ring heterocycle containing a single nitrogen atom, wherein the ring is substituted with 0, 1 or 2 substituents independently selected from halo,  $C_{1-2}$ haloalkyl and  $C_{1-3}$ alkyl; wherein at least one of  $R^5$ ,  $R^6$ ,  $R^7$ ,  $R^8$  and  $R^9$  is  $C_{1-8}$ alkyl,  $C_{1-4}$ haloalkyl, halo, - $OC_{1-4}$ haloalkyl, - $OC_{2-6}$ alkylNR<sup>d</sup>R<sup>d</sup>, - $OC_{2-6}$ alkylOR<sup>d</sup>, -NR<sup>d</sup>C<sub>1-4</sub>haloalkyl, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>, -C<sub>1-8</sub>alkylOR<sup>d</sup>, -C<sub>1-6</sub>alkylNR<sup>d</sup>R<sup>d</sup> or -S( $C_{1-6}$ alkyl);

15  $R^{10}$  is independently, at each instance, selected from H,  $C_{1-8}$ alkyl,  $C_{1-4}$ haloalkyl, halo, cyano, nitro, -C(=O)( $C_{1-8}$ alkyl), -C(=O)O( $C_{1-8}$ alkyl), -C(=O)NR<sup>d</sup>R<sup>d</sup>, -C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>, -OR<sup>d</sup>, -OC(=O)( $C_{1-8}$ alkyl), -OC(=O)NR<sup>d</sup>R<sup>d</sup>, -OC(=O)N(R<sup>d</sup>)S(=O)<sub>2</sub>( $C_{1-8}$ alkyl), -OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -OC<sub>2-6</sub>alkylOR<sup>d</sup>, -SR<sup>d</sup>, -S(=O)( $C_{1-8}$ alkyl), -S(=O)<sub>2</sub>( $C_{1-8}$ alkyl), -S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)( $C_{1-8}$ alkyl), -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)O( $C_{1-8}$ alkyl), -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=O)( $C_{1-8}$ alkyl),

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- N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>,
- N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup> and
- NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>; or R<sup>10</sup> is a saturated or unsaturated 5-, 6- or 7-membered monocyclic or 6-, 7-, 8-, 9-, 10- or 11-membered bicyclic ring containing 1, 2 or 3 atoms selected from N, O and S, wherein the ring is fused with 0 or 1 benzo groups and 0 or 1 saturated or unsaturated 5-, 6- or 7-membered heterocyclic ring containing 1, 2 or 3 atoms selected from N, O and S; wherein the carbon atoms of the ring are substituted by 0, 1 or 2 oxo groups, wherein the ring is substituted by 0, 1, 2 or 3 groups selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro,
- 5 -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl), -C(=O)NR<sup>d</sup>R<sup>d</sup>, -C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>, -OR<sup>d</sup>,
- 10 -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>d</sup>R<sup>d</sup>, -OC(=O)N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl),
- OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -OC<sub>2-6</sub>alkylOR<sup>d</sup>, -SR<sup>d</sup>, -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl),
- S(=O)NR<sup>d</sup>R<sup>d</sup>, -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl),
- S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl),
- 15 -N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>,
- N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup> and
- NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>; or R<sup>10</sup> is C<sub>1-4</sub>alkyl substituted by 0, 1, 2 or 3 groups selected from C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl),
- C(=O)NR<sup>d</sup>R<sup>d</sup>, -C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>, -OR<sup>d</sup>, -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>d</sup>R<sup>d</sup>,
- 20 -OC(=O)N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -OC<sub>2-6</sub>alkylOR<sup>d</sup>, -SR<sup>d</sup>,
- S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>,
- S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl),
- S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl),
- N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>,
- 25 -N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup> and
- NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>;

R<sup>11</sup> is independently, at each instance, selected from H, C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl), -C(=O)NR<sup>d</sup>R<sup>d</sup>, -C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>, -OR<sup>d</sup>, -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>d</sup>R<sup>d</sup>,

- 30 -OC(=O)N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -OC<sub>2-6</sub>alkylOR<sup>d</sup>, -SR<sup>d</sup>,
- S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>,
- S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl),

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- S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl),
- N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>,
- N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup> and
- NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>; or R<sup>11</sup> is a saturated or unsaturated 5-, 6- or 7-membered
- 5 monocyclic or 6-, 7-, 8-, 9-, 10- or 11-membered bicyclic ring containing 1, 2 or 3 atoms selected from N, O and S, wherein the ring is fused with 0 or 1 benzo groups and 0 or 1 saturated or unsaturated 5-, 6- or 7-membered heterocyclic ring containing 1, 2 or 3 atoms selected from N, O and S; wherein the carbon atoms of the ring are substituted by 0, 1 or 2 oxo groups, wherein the ring is substituted by
- 10 0, 1, 2 or 3 groups selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl), -C(=O)NR<sup>d</sup>R<sup>d</sup>, -C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>, -OR<sup>d</sup>, -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>d</sup>R<sup>d</sup>, -OC(=O)N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -OC<sub>2-6</sub>alkylOR<sup>d</sup>, -SR<sup>d</sup>, -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl),
- 15 -S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl),
- N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>,
- N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup> and
- NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>; or R<sup>11</sup> is C<sub>1-4</sub>alkyl substituted by 0, 1, 2 or 3 groups selected
- from C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl),
- 20 -C(=O)NR<sup>d</sup>R<sup>d</sup>, -C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>, -OR<sup>d</sup>, -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>d</sup>R<sup>d</sup>, -OC(=O)N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -OC<sub>2-6</sub>alkylOR<sup>d</sup>, -SR<sup>d</sup>, -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>,
- S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl),
- S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl),
- 25 -N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>,
- N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup> and
- NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>; or R<sup>10</sup> and R<sup>11</sup> together are a saturated or unsaturated 3- or
- 4-atom bridge containing 0, 1, 2 or 3 atoms selected from O, N and S with the
- remaining atoms being carbon, so long as the combination of O and S atoms is not
- 30 greater than 2, wherein the each of the carbon atoms in the bridge is substituted by H, =O, C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl), -C(=O)NR<sup>d</sup>R<sup>d</sup>, -C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>, -OR<sup>d</sup>, -OC(=O)(C<sub>1-8</sub>alkyl),

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- OC(=O)NR<sup>d</sup>R<sup>d</sup>, -OC(=O)N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>,
- OC<sub>2-6</sub>alkylOR<sup>d</sup>, -SR<sup>d</sup>, -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>,
- S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl),
- S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl),
- 5 -N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>,
- N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup> and
- NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>, and any nitrogen atoms in the bridge are substituted by H,
- C<sub>1-6</sub>alkylOR<sup>d</sup>, -C<sub>1-6</sub>alkyl, -C<sub>1-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -C<sub>1-3</sub>alkylC(=O)OR<sup>d</sup>,
- C<sub>1-3</sub>alkylC(=O)NR<sup>d</sup>R<sup>d</sup>, -C<sub>1-3</sub>alkylOC(=O)C<sub>1-6</sub>alkyl, -C<sub>1-3</sub>alkylNR<sup>d</sup>C(=O)C<sub>1-6</sub>alkyl,
- 10 -C(=O)R<sup>f</sup> or -C<sub>1-3</sub>alkylR<sup>f</sup>;

$R^{12}$  is independently, at each instance, selected from H, C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl), -C(=O)NR<sup>d</sup>R<sup>d</sup>, -C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>, -OR<sup>d</sup>, -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>d</sup>R<sup>d</sup>,

- OC(=O)N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -OC<sub>2-6</sub>alkylOR<sup>d</sup>, -SR<sup>d</sup>,
- 15 -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>,
- S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl),
- S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl),
- N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>,
- N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup> and
- 20 -NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>; or  $R^{12}$  is a saturated or unsaturated 5-, 6- or 7-membered monocyclic or 6-, 7-, 8-, 9-, 10- or 11-membered bicyclic ring containing 1, 2 or 3 atoms selected from N, O and S, wherein the ring is fused with 0 or 1 benzo groups and 0 or 1 saturated or unsaturated 5-, 6- or 7-membered heterocyclic ring containing 1, 2 or 3 atoms selected from N, O and S; wherein the carbon atoms of
- 25 the ring are substituted by 0, 1 or 2 oxo groups, wherein the ring is substituted by 0, 1, 2 or 3 groups selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl), -C(=O)NR<sup>d</sup>R<sup>d</sup>, -C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>, -OR<sup>d</sup>,
- OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>d</sup>R<sup>d</sup>, -OC(=O)N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl),
- OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -OC<sub>2-6</sub>alkylOR<sup>d</sup>, -SR<sup>d</sup>, -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl),
- 30 -S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl),
- S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl),
- N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>,

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- N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup> and
- NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>; or R<sup>12</sup> is C<sub>1-4</sub>alkyl substituted by 0, 1, 2 or 3 groups selected from C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl), -C(=O)NR<sup>d</sup>R<sup>d</sup>, -C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>, -OR<sup>d</sup>, -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>d</sup>R<sup>d</sup>,
- 5 -OC(=O)N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -OC<sub>2-6</sub>alkylOR<sup>d</sup>, -SR<sup>d</sup>,  
 -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>,  
 -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl),  
 -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl),  
 -N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>,
- 10 -N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup> and  
 -NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>; wherein if R<sup>11</sup> or R<sup>13</sup> is CF<sub>3</sub>, then R<sup>12</sup> is not F; or R<sup>11</sup> and R<sup>12</sup>  
 together are a saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3  
 atoms selected from O, N and S with the remaining atoms being carbon, so long  
 as the combination of O and S atoms is not greater than 2, wherein the each of the  
 15 carbon atoms in the bridge is substituted by H, =O, C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo,  
 cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl), -C(=O)NR<sup>d</sup>R<sup>d</sup>,  
 -C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>, -OR<sup>d</sup>, -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>d</sup>R<sup>d</sup>,  
 -OC(=O)N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -OC<sub>2-6</sub>alkylOR<sup>d</sup>, -SR<sup>d</sup>,  
 -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>,  
 20 -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl),  
 -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl),  
 -N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>,  
 -N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup> and  
 -NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>, and any nitrogen atoms in the bridge are substituted by H,  
 25 -C<sub>1-6</sub>alkylOR<sup>d</sup>, -C<sub>1-6</sub>alkyl, -C<sub>1-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -C<sub>1-3</sub>alkylC(=O)OR<sup>d</sup>,  
 -C<sub>1-3</sub>alkylC(=O)NR<sup>d</sup>R<sup>d</sup>, -C<sub>1-3</sub>alkylOC(=O)C<sub>1-6</sub>alkyl, -C<sub>1-3</sub>alkylNR<sup>d</sup>C(=O)C<sub>1-6</sub>alkyl,  
 -C(=O)R<sup>f</sup> or -C<sub>1-3</sub>alkylR<sup>f</sup>;
- R<sup>13</sup> is independently, at each instance, selected from H, C<sub>1-8</sub>alkyl,  
 C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl),  
 30 -C(=O)NR<sup>d</sup>R<sup>d</sup>, -C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>, -OR<sup>d</sup>, -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>d</sup>R<sup>d</sup>,  
 -OC(=O)N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -OC<sub>2-6</sub>alkylOR<sup>d</sup>, -SR<sup>d</sup>,  
 -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>,

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- S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl),
- S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl),
- N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>,
- N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup> and
- 5 -NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>; or R<sup>13</sup> is a saturated or unsaturated 5-, 6- or 7-membered monocyclic or 6-, 7-, 8-, 9-, 10- or 11-membered bicyclic ring containing 1, 2 or 3 atoms selected from N, O and S, wherein the ring is fused with 0 or 1 benzo groups and 0 or 1 saturated or unsaturated 5-, 6- or 7-membered heterocyclic ring containing 1, 2 or 3 atoms selected from N, O and S; wherein the carbon atoms of the ring are substituted by 0, 1 or 2 oxo groups, wherein the ring is substituted by 10 0, 1, 2 or 3 groups selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl), -C(=O)NR<sup>d</sup>R<sup>d</sup>, -C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>, -OR<sup>d</sup>, -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>d</sup>R<sup>d</sup>, -OC(=O)N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -OC<sub>2-6</sub>alkylOR<sup>d</sup>, -SR<sup>d</sup>, -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl),
- 15 -S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup> and
- 20 -NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>; or R<sup>13</sup> is C<sub>1-4</sub>alkyl substituted by 0, 1, 2 or 3 groups selected from C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl), -C(=O)NR<sup>d</sup>R<sup>d</sup>, -C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>, -OR<sup>d</sup>, -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>d</sup>R<sup>d</sup>, -OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -OC<sub>2-6</sub>alkylOR<sup>d</sup>, -SR<sup>d</sup>, -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl),
- 25 -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup> and
- 30 -NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>;

R<sup>14</sup> is independently, at each instance, selected from H, C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl), -C(=O)NR<sup>d</sup>R<sup>d</sup>, -C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>, -OR<sup>d</sup>, -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>d</sup>R<sup>d</sup>, -OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -OC<sub>2-6</sub>alkylOR<sup>d</sup>, -SR<sup>d</sup>,

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- S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>,
- S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl),
- S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl),
- N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>,
- 5 -N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup> and  
-NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>; or R<sup>14</sup> is a saturated or unsaturated 5-, 6- or 7-membered  
monocyclic or 6-, 7-, 8-, 9-, 10- or 11-membered bicyclic ring containing 1, 2 or 3  
atoms selected from N, O and S, wherein the ring is fused with 0 or 1 benzo  
groups and 0 or 1 saturated or unsaturated 5-, 6- or 7-membered heterocyclic ring
- 10 containing 1, 2 or 3 atoms selected from N, O and S; wherein the carbon atoms of  
the ring are substituted by 0, 1 or 2 oxo groups, wherein the ring is substituted by  
0, 1, 2 or 3 groups selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro,  
-C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl), -C(=O)NR<sup>d</sup>R<sup>d</sup>, -C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>, -OR<sup>d</sup>,
- OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>d</sup>R<sup>d</sup>, -OC(=O)N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl),
- 15 -OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -OC<sub>2-6</sub>alkylOR<sup>d</sup>, -SR<sup>d</sup>, -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl),  
-S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl),  
-S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl),  
-N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>,
- N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup> and  
-NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>; or R<sup>14</sup> is C<sub>1-4</sub>alkyl substituted by 0, 1, 2 or 3 groups selected  
from C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl),  
-C(=O)NR<sup>d</sup>R<sup>d</sup>, -C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>, -OR<sup>d</sup>, -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>d</sup>R<sup>d</sup>,  
-OC(=O)N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -OC<sub>2-6</sub>alkylOR<sup>d</sup>, -SR<sup>d</sup>,  
-S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>,
- 20 25 -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl),  
-S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl),  
-N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>,  
-N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup> and  
-NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>;
- 30 R<sup>d</sup> is independently, at each instance, H, phenyl, benzyl or C<sub>1-6</sub>alkyl;  
R<sup>c</sup> is a heterocycle selected from the group of thiophene, pyrrole,  
1,3-oxazole, 1,3-thiazole, 1,3,4-oxadiazole, 1,3,4-thiadiazole, 1,2,3-oxadiazole,

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1,2,3-thiadiazole, 1H-1,2,3-triazole, isothiazole, 1,2,4-oxadiazole, 1,2,4-thiadiazole, 1,2,3,4-oxatriazole, 1,2,3,4-thiatriazole, 1H-1,2,3,4-tetraazole, 1,2,3,5-oxatriazole, 1,2,3,5-thiatriazole, furan, imidazol-1-yl, imidazol-4-yl, 1,2,4-triazol-4-yl, 1,2,4-triazol-5-yl, isoxazol-3-yl, isoxazol-5-yl, pyrazol-3-yl, pyrazol-5-yl, thiolane, pyrrolidine, tetrahydrofuran, 4,5-dihydrothiophene, 2-pyrroline, 4,5-dihydrofuran, pyridazine, pyrimidine, pyrazine, 1,2,3-triazine, 1,2,4-triazine, 1,2,4-triazine, 1,3,5-triazine, pyridine, 2H-3,4,5,6-tetrahydropyran, thiane, 1,2-diazaperhydroine, 1,3-diazaperhydroine, piperazine, 1,3-oxazaperhydroine, morpholine, 1,3-thiazaperhydroine, 1,4-thiazaperhydroine, piperidine, 2H-3,4-dihydropyran, 2,3-dihydro-4H-thiin, 1,4,5,6-tetrahydropyridine, 2H-5,6-dihydropyran, 2,3-dihydro-6H-thiin, 1,2,5,6-tetrahydropyridine, 3,4,5,6-tetrahydropyridine, 4H-pyran, 4H-thiin, 1,4-dihydropyridine, 1,4-dithiane, 1,4-dioxane, 1,4-oxathiane, 1,2-oxazolidine, 1,2-thiazolidine, pyrazolidine, 1,3-oxazolidine, 1,3-thiazolidine, imidazolidine, 1,2,4-oxadiazolidine, 1,3,4-oxadiazolidine, 1,2,4-thiadiazolidine, 1,3,4-thiadiazolidine, 1,2,4-triazolidine, 2-imidazoline, 3-imidazoline, 2-pyrazoline, 4-imidazoline, 2,3-dihydroisothiazole, 4,5-dihydroisoxazole, 4,5-dihydroisothiazole, 2,5-dihydroisoxazole, 2,3-dihydroisothiazole, 2,5-dihydroisoxazole, 4,5-dihydrooxazole, 2,3-dihydrooxazole, 2,5-dihydrooxazole, 4,5-dihydrothiazole, 2,3-dihydrothiazole,, 2,5-dihydrothiazole, 1,3,4-oxathiazolidine, 1,4,2-oxathiazolidine, 2,3-dihydro-1H-[1,2,3]triazole, 2,5-dihydro-1H-[1,2,3]triazole, 4,5-dihydro-1H-[1,2,3]triazole, 2,3-dihydro-1H-[1,2,4]triazole, 4,5-dihydro-1H-[1,2,4]triazole, 2,3-dihydro-[1,2,4]oxadiazole, 2,5-dihydro-[1,2,4]oxadiazole, 4,5-dihydro-[1,2,4]thiadiazole, 2,3-dihydro-[1,2,4]thiadiazole, 2,5-dihydro-[1,2,4]thiadiazole, 4,5-dihydro-[1,2,4]thiadiazole, 2,5-dihydro-[1,2,4]thiadiazole, 2,3-dihydro-[1,2,4]thiadiazole, 4,5-dihydro-[1,2,4]thiadiazole, 2,3-dihydro-[1,3,4]oxadiazole, 2,3-dihydro-[1,3,4]thiadiazole, 1,4,2-oxathiazole, 1,4,2-dithiazaperhydroine, 1,4,2-dioxazaperhydroine, 1,3,5-oxadiazaperhydroine, 1,3,5-thiadiazaperhydroine, 1,2,4-triazaperhydroine, 1,4,2-dithiazaperhydroine, 1,4,2-dioxazaperhydroine, 1,3,5-oxadiazaperhydroine, 1,3,5-thiadiazaperhydroine, 1,2,4-thiadiazaperhydroine, 1,3,4-oxadiazaperhydroine, 1,4,3-oxathiazaperhydroine,

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1,4,2-oxathiazaperhydroine, 1,4,5,6-tetrahydropyridazine, 1,2,3,4-tetrahydropyridazine, 1,2,3,6-tetrahydropyridazine, 1,2,5,6-tetrahydropyrimidine, 1,2,3,4-tetrahydropyrimidine, 1,4,5,6-tetrahydropyrimidine, 1,2,3,6-tetrahydropyrazine, 1,2,3,4-tetrahydropyrazine, 5,6-dihydro-4H-[1,2]oxazine, 5,6-dihydro-2H-[1,2]oxazine, 3,6-dihydro-2H-[1,2]oxazine, 3,4-dihydro-2H-[1,2]oxazine, 5,6-dihydro-4H-[1,2]thiazine, 5,6-dihydro-2H-[1,2] thiazine, 3,6-dihydro-2H-[1,2] thiazine, 3,4-dihydro-2H-[1,2] thiazine, 5,6-dihydro-2H-[1,3]oxazine, 5,6-dihydro-4H-[1,3]oxazine, 3,6-dihydro-2H-[1,3]oxazine, 3,4-dihydro-2H-[1,3]oxazine, 3,6-dihydro-2H-[1,4]oxazine, 3,4-dihydro-2H-[1,4]oxazine, 5,6-dihydro-2H-[1,3]thiazine, 5,6-dihydro-4H-[1,3]thiazine, 3,6-dihydro-2H-[1,3]thiazine, 3,4-dihydro-2H-[1,3]thiazine, 3,6-dihydro-2H-[1,4]thiazine, 1,2,3,6-tetrahydro-[1,2,4]triazine, 1,2,3,4-tetrahydro-[1,2,4]triazine, 1,2,3,4-tetrahydro-[1,3,5]triazine, 2,3,4,5-tetrahydro-[1,2,4]triazine, 1,4,5,6-tetrahydro-[1,2,4]triazine, 5,6-dihydro-[1,4,2]dioxazine, 5,6-dihydro-[1,4,2]dioxazine, 5,6-dihydro-[1,4,2]dithiazine, 2,3-dihydro-[1,4,2]dioxazine, 3,4-dihydro-2H-[1,3,4]oxadiazine, 3,6-dihydro-2H-[1,3,4]oxadiazine, 3,4-dihydro-2H-[1,3,5]oxadiazine, 3,6-dihydro-2H-[1,3,5]oxadiazine, 5,6-dihydro-2H-[1,2,5]oxadiazine, 5,6-dihydro-4H-[1,2,5]oxadiazine, 3,4-dihydro-2H-[1,3,4]thiadiazine, 3,6-dihydro-2H-[1,3,4]thiadiazine, 3,4-dihydro-2H-[1,3,5]thiadiazine, 3,6-dihydro-2H-[1,3,5]thiadiazine, 5,6-dihydro-2H-[1,2,5]thiadiazine, 5,6-dihydro-4H-[1,2,5]thiadiazine, 3,6-dihydro-2H-[1,2,3]oxadiazine, 3,6-dihydro-2H-[1,2,5]oxadiazine, 5,6-dihydro-2H-[1,2,3]thiadiazine, 3,6-dihydro-2H-[1,2,5]thiadiazine, 5,6-dihydro-4H-[1,3,4]thiadiazine, 3,4-dihydro-2H-[1,2,5]thiadiazine, 5,6-dihydro-[1,4,3]oxathiazine, 5,6-dihydro-[1,4,2]oxathiazine, 2,3-dihydro-[1,4,3]oxathiazine, 2,3-dihydro-[1,4,2]oxathiazine, 4,5-dihydropyridine, 1,6-dihydropyridine, 5,6-dihydropyridine, 2H-pyran, 2H-thiin, 3,6-dihydropyridine, 2,3-dihydropyridazine, 2,5-dihydropyridazine, 4,5-dihydropyridazine, 1,2-dihydropyridazine, 2,3-dihydropyrimidine, 2,5-dihydropyrimidine, 5,6-dihydropyrimidine, 3,6-dihydropyrimidine, 4,5-dihydropyrazine, 5,6-dihydropyrazine, 3,6-dihydropyrazine, 4,5-dihydropyrazine,

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1,4-dihdropyrazine, 1,4-dithiin, 1,4-dioxin, 2H-1,2-oxazine, 6H-1,2-oxazine, 4H-  
 1,2-oxazine, 2H-1,3-oxazine, 4H-1,3-oxazine, 6H-1,3-oxazine, 2H-1,4-oxazine,  
 4H-1,4-oxazine, 2H-1,3-thiazine, 2H-1,4-thiazine, 4H-1,2-thiazine, 6H-1,3-  
 thiazine, 4H-1,4-thiazine, 2H-1,2-thiazine, 6H-1,2-thiazine, 1,4-oxathiin, 2H,5H-  
 5 1,2,3-triazine, 1H,4H-1,2,3-triazine, 4,5-dihydro-1,2,3-triazine, 1H,6H-1,2,3-  
 triazine, 1,2-dihydro-1,2,3-triazine, 2,3-dihydro-1,2,4-triazine, 3H,6H-1,2,4-  
 triazine, 1H,6H-1,2,4-triazine, 3,4-dihydro-1,2,4-triazine, 1H,4H-1,2,4-triazine,  
 5,6-dihydro-1,2,4-triazine, 4,5-dihydro-1,2,4-triazine, 2H,5H-1,2,4-triazine, 1,2-  
 dihydro-1,2,4-triazine, 1H,4H-1,3,5-triazine, 1,2-dihydro-1,3,5-triazine, 1,4,2-  
 10 dithiazine, 1,4,2-dioxazine, 2H-1,3,4-oxadiazine, 2H-1,3,5-oxadiazine, 6H-1,2,5-  
 oxadiazine, 4H-1,3,4-oxadiazine, 4H-1,3,5-oxadiazine, 4H-1,2,5-oxadiazine, 2H-  
 1,3,5-thiadiazine, 6H-1,2,5-thiadiazine, 4H-1,3,4-thiadiazine, 4H-1,3,5-  
 thiadiazine, 4H-1,2,5-thiadiazine, 2H-1,3,4-thiadiazine, 6H-1,3,4-thiadiazine, 6H-  
 15 1,3,4-oxadiazine and 1,4,2-oxathiazine, wherein the heterocycle is optionally  
 vicinally fused with a saturated or unsaturated 5-, 6- or 7-membered ring  
 containing 0, 1 or 2 atoms independently selected from N, O and S;

R<sup>f</sup> is phenyl substituted by 0, 1 or 2 groups selected from halo, C<sub>1-4</sub>alkyl,  
 C<sub>1-3</sub>haloalkyl, -OR<sup>d</sup> and -NR<sup>d</sup>R<sup>d</sup>; or R<sup>f</sup> is a saturated or unsaturated 5- or  
 6-membered ring heterocycle containing 1, 2 or 3 heteroatoms independently  
 20 selected from N, O and S, wherein no more than 2 of the ring members are O or S,  
 wherein the heterocycle is optionally fused with a phenyl ring, and the carbon  
 atoms of the heterocycle are substituted by 0, 1 or 2 oxo groups, wherein the  
 heterocycle or fused phenyl ring is substituted by 0, 1, 2 or 3 substituents selected  
 from halo, C<sub>1-4</sub>alkyl, C<sub>1-3</sub>haloalkyl, -OR<sup>d</sup> and -NR<sup>d</sup>R<sup>d</sup>; and  
 25 R<sup>g</sup> is hydrogen or -CH<sub>3</sub>.

22. The compound according to Claim 21, wherein R<sup>16</sup> is halo, -NH<sub>2</sub>,  
 -NHC<sub>1-3</sub>alkyl, -N(C<sub>1-3</sub>alkyl)C<sub>1-3</sub>alkyl or C<sub>1-3</sub>alkyl.

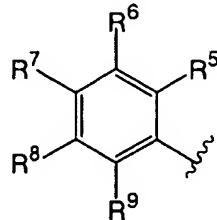
30 23. The compound according to Claim 21, wherein R<sup>10</sup> is  
 independently, at each instance, C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro,  
 -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl), -C(=O)NR<sup>d</sup>R<sup>d</sup>, -C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>, -OR<sup>d</sup>,

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- OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>d</sup>R<sup>d</sup>, -OC(=O)N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl),
- OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -OC<sub>2-6</sub>alkylOR<sup>d</sup>, -SR<sup>d</sup>, -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl),
- S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl),
- S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl),
- 5 -N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>,
- N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup> and
- NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>; or R<sup>10</sup> is a saturated or unsaturated 5-, 6- or 7-membered monocyclic or 6-, 7-, 8-, 9-, 10- or 11-membered bicyclic ring containing 1, 2 or 3 atoms selected from N, O and S, wherein the ring is fused with 0 or 1 benzo
- 10 groups and 0 or 1 saturated or unsaturated 5-, 6- or 7-membered heterocyclic ring containing 1, 2 or 3 atoms selected from N, O and S; wherein the carbon atoms of the ring are substituted by 0, 1 or 2 oxo groups, wherein the ring is substituted by 0, 1, 2 or 3 groups selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl), -C(=O)NR<sup>d</sup>R<sup>d</sup>, -C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>, -OR<sup>d</sup>,
- 15 -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>d</sup>R<sup>d</sup>, -OC(=O)N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl),
- OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -OC<sub>2-6</sub>alkylOR<sup>d</sup>, -SR<sup>d</sup>, -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl),
- S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl),
- S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl),
- N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>,
- 20 -N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup> and
- NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>; or R<sup>10</sup> is C<sub>1-4</sub>alkyl substituted by 0, 1, 2 or 3 groups selected from C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl), -C(=O)NR<sup>d</sup>R<sup>d</sup>, -C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>, -OR<sup>d</sup>, -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>d</sup>R<sup>d</sup>,
- 25 -OC(=O)N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -OC<sub>2-6</sub>alkylOR<sup>d</sup>, -SR<sup>d</sup>,
- S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>,
- S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl),
- S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl),
- N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>,
- 30 -N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup> and
- NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>.

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24. The compound according to any one of Claim 21, wherein R<sup>1</sup> is



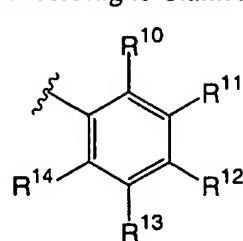
25. The compound according to Claim 24, wherein R<sup>7</sup> is C<sub>1.5</sub>alkyl,  
5 halo or C<sub>1.4</sub>haloalkyl.

26. The compound according to Claim 21, wherein R<sup>1</sup> is naphthyl  
substituted by 0, 1, 2 or 3 substituents independently selected from R<sup>5</sup>.

10 27. The compound according to Claim 21, wherein R<sup>1</sup> is R<sup>e</sup> substituted  
by 0, 1, 2 or 3 substituents independently selected from R<sup>5</sup>.

28. The compound according to Claim 27, wherein R<sup>1</sup> is R<sup>e</sup> substituted  
by 1, 2 or 3 substituents independently selected from R<sup>5</sup>.

15 29. The compound according to Claim 21, wherein R<sup>4</sup> is



30. The compound according to Claim 29, wherein  
20 R<sup>10</sup> and R<sup>11</sup> together are a saturated or unsaturated 3- or 4-atom bridge  
containing 0, 1, 2 or 3 atoms selected from O, N and S with the remaining atoms  
being carbon, so long as the combination of O and S atoms is not greater than 2,  
wherein each of the carbon atoms in the bridge is substituted by H, =O,  
C<sub>1.8</sub>alkyl, C<sub>1.4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1.8</sub>alkyl),

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- C(=O)O(C<sub>1-8</sub>alkyl), -C(=O)NR<sup>d</sup>R<sup>d</sup>, -C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>, -OR<sup>d</sup>, -OC(=O)(C<sub>1-8</sub>alkyl),
- OC(=O)NR<sup>d</sup>R<sup>d</sup>, -OC(=O)N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>,
- OC<sub>2-6</sub>alkylOR<sup>d</sup>, -SR<sup>d</sup>, -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>,
- S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl),
- 5 -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl),
- N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>,
- N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup> and
- NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>, and any nitrogen atoms in the bridge are substituted by H,
- C<sub>1-6</sub>alkylOR<sup>d</sup>, -C<sub>1-6</sub>alkyl, -C<sub>1-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -C<sub>1-3</sub>alkylC(=O)OR<sup>d</sup>,
- 10 -C<sub>1-3</sub>alkylC(=O)NR<sup>d</sup>R<sup>d</sup>, -C<sub>1-3</sub>alkylOC(=O)C<sub>1-6</sub>alkyl, -C<sub>1-3</sub>alkylNR<sup>d</sup>C(=O)C<sub>1-6</sub>alkyl,
- C(=O)R<sup>f</sup> or -C<sub>1-3</sub>alkylR<sup>f</sup>; or
- R<sup>11</sup> and R<sup>12</sup> together are a saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected from O, N and S with the remaining atoms being carbon, so long as the combination of O and S atoms is not greater than 2,
- 15 wherein the each of the carbon atoms in the bridge is substituted by H, =O, C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl),
- C(=O)O(C<sub>1-8</sub>alkyl), -C(=O)NR<sup>d</sup>R<sup>d</sup>, -C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>, -OR<sup>d</sup>, -OC(=O)(C<sub>1-8</sub>alkyl),
- OC(=O)NR<sup>d</sup>R<sup>d</sup>, -OC(=O)N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>,
- OC<sub>2-6</sub>alkylOR<sup>d</sup>, -SR<sup>d</sup>, -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>,
- 20 -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl),
- S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl),
- N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>,
- N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup> and
- NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>, and any nitrogen atoms in the bridge are substituted by H,
- 25 -C<sub>1-6</sub>alkylOR<sup>d</sup>, -C<sub>1-6</sub>alkyl, -C<sub>1-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -C<sub>1-3</sub>alkylC(=O)OR<sup>d</sup>,
- C<sub>1-3</sub>alkylC(=O)NR<sup>d</sup>R<sup>d</sup>, -C<sub>1-3</sub>alkylOC(=O)C<sub>1-6</sub>alkyl, -C<sub>1-3</sub>alkylNR<sup>d</sup>C(=O)C<sub>1-6</sub>alkyl,
- C(=O)R<sup>f</sup> or -C<sub>1-3</sub>alkylR<sup>f</sup>.

31. The compound according to Claim 21, wherein R<sup>4</sup> is a saturated or  
 30 unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 atoms selected from O, N and S that is optionally vicinally fused with a saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected from O, N and S with

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the remaining atoms being carbon, so long as the combination of O and S atoms is not greater than 2, wherein the carbon atoms of the heterocycle and bridge are substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, oxo, -OR<sup>d</sup>, -S(=O)<sub>n</sub>C<sub>1-6</sub>alkyl, -OC<sub>1-4</sub>haloalkyl,  
5 -OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -OC<sub>2-6</sub>alkylOR<sup>d</sup>, -OC<sub>1-6</sub>alkylC(=O)OR<sup>d</sup>, -NR<sup>d</sup>R<sup>d</sup>,  
-NR<sup>d</sup>C<sub>1-4</sub>haloalkyl, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>, -C(=O)C<sub>1-6</sub>alkyl,  
-C(=O)OC<sub>1-6</sub>alkyl, -OC(=O)C<sub>1-6</sub>alkyl, -C(=O)NR<sup>d</sup>C<sub>1-6</sub>alkyl and  
-NR<sup>d</sup>C(=O)C<sub>1-6</sub>alkyl; and saturated carbon atoms may be additionally substituted by =O; and any nitrogen atoms in the bridge are substituted by H, -C<sub>1-6</sub>alkylOR<sup>d</sup>,  
10 -C<sub>1-6</sub>alkyl, -C<sub>1-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -C<sub>1-3</sub>alkylC(=O)OR<sup>d</sup>, -C<sub>1-3</sub>alkylC(=O)NR<sup>d</sup>R<sup>d</sup>,  
-C<sub>1-3</sub>alkylOC(=O)C<sub>1-6</sub>alkyl, -C<sub>1-3</sub>alkylNR<sup>d</sup>C(=O)C<sub>1-6</sub>alkyl, -C(=O)R<sup>f</sup> or  
-C<sub>1-3</sub>alkylR<sup>f</sup>.

32. The compound according to Claim 31, wherein R<sup>4</sup> is a saturated or  
15 unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 atoms selected from O, N and S that is optionally vicinally fused with a saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected from O, N and S with the remaining atoms being carbon, so long as the combination of O and S atoms is not greater than 2, wherein the carbon atoms of the heterocycle and bridge are substituted by 1, 2 or 3 substituents independently selected from C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, oxo, -OR<sup>d</sup>, -S(=O)<sub>n</sub>C<sub>1-6</sub>alkyl, -OC<sub>1-4</sub>haloalkyl,  
-OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -OC<sub>2-6</sub>alkylOR<sup>d</sup>, -OC<sub>1-6</sub>alkylC(=O)OR<sup>d</sup>, -NR<sup>d</sup>R<sup>d</sup>,  
-NR<sup>d</sup>C<sub>1-4</sub>haloalkyl, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>, -C(=O)C<sub>1-6</sub>alkyl,  
-C(=O)OC<sub>1-6</sub>alkyl, -OC(=O)C<sub>1-6</sub>alkyl, -C(=O)NR<sup>d</sup>C<sub>1-6</sub>alkyl and  
-NR<sup>d</sup>C(=O)C<sub>1-6</sub>alkyl; and saturated carbon atoms may be additionally substituted by =O; and any nitrogen atoms in the bridge are substituted by H, -C<sub>1-6</sub>alkylOR<sup>d</sup>,  
20 -C<sub>1-6</sub>alkyl, -C<sub>1-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -C<sub>1-3</sub>alkylC(=O)OR<sup>d</sup>, -C<sub>1-3</sub>alkylC(=O)NR<sup>d</sup>R<sup>d</sup>,  
-C<sub>1-3</sub>alkylOC(=O)C<sub>1-6</sub>alkyl, -C<sub>1-3</sub>alkylNR<sup>d</sup>C(=O)C<sub>1-6</sub>alkyl, -C(=O)R<sup>f</sup> or  
-C<sub>1-3</sub>alkylR<sup>f</sup>.  
25

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33. The compound according to Claim 21, wherein or R<sup>4</sup> is  
10-membered bicyclic ring comprising fused 6-membered rings, containing 0, 1,

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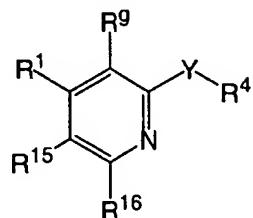
2, 3 or 4 N atoms with the remainder being carbon atoms, with at least one of the 6-membered rings being aromatic, wherein the carbon atoms are substituted by H, halo, OR<sup>d</sup>, NR<sup>d</sup>R<sup>d</sup>, C<sub>1-6</sub>alkyl and C<sub>1-3</sub>haloalkyl; and saturated carbon atoms may be additionally substituted by =O.

5

34. The compound according to Claim 33, wherein R<sup>4</sup> is 10-membered bicyclic ring comprising fused 6-membered rings, containing 1, 2, 3 or 4 N atoms with the remainder being carbon atoms, with at least one of the 6-membered rings being aromatic, wherein the carbon atoms are substituted by H, halo, OR<sup>d</sup>, NR<sup>d</sup>R<sup>d</sup>, C<sub>1-6</sub>alkyl and C<sub>1-3</sub>haloalkyl; and saturated carbon atoms may be additionally substituted by =O.

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35. A compound having the structure:



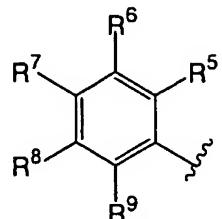
15 or any pharmaceutically-acceptable salt thereof, wherein:

n is independently, at each instance, 0, 1 or 2;

o is independently, at each instance, 0, 1, 2 or 3;

Y is NH, O or S;

R<sup>1</sup> is



20

or R<sup>1</sup> is a naphthyl substituted by 0, 1, 2 or 3 substituents independently selected from R<sup>5</sup>; or R<sup>1</sup> is R<sup>e</sup> substituted by 1, 2 or 3 substituents independently selected from R<sup>5</sup>;

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$R^{15}$  is, independently, in each instance,  $R^{10}$ ,  $C_{1-8}alkyl$  substituted by 0, 1 or 2 substituents selected from  $R^{10}$ ,  $-(CH_2)_nphenyl$  substituted by 0, 1, 2 or 3 substituents independently selected from  $R^{10}$ , or a saturated or unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 heteroatoms independently selected from N, O and S, wherein no more than 2 of the ring members are O or S, wherein the heterocycle is optionally fused with a phenyl ring, and the heterocycle or fused phenyl ring is substituted by 0, 1, 2 or 3 substituents independently selected from  $R^{10}$ ;

$R^{16}$  is, independently, in each instance, H, halo,  $-NH_2$ ,  $-NHC_{1-3}alkyl$ ,  $-N(C_{1-3}alkyl)C_{1-3}alkyl$  or  $C_{1-3}alkyl$ ;

$R^4$  is a saturated or unsaturated 5- or 6-membered ring containing 0, 1, 2 or 3 atoms selected from O, N and S that is optionally vicinally fused with a saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected from O, N and S with the remaining atoms being carbon, so long as the combination of O and S atoms is not greater than 2, wherein the ring and bridge are substituted by 0, 1, 2 or 3 substituents independently selected from  $C_{1-8}alkyl$ ,  $C_{1-4}haloalkyl$ , halo, cyano, nitro,  $-C(=O)R^n$ ,  $-C(=O)OR^n$ ,  $-C(=O)NR^mR^m$ ,  $-C(=NR^m)NR^mR^m$ ,  $-OR^m$ ,  $-OC(=O)R^n$ ,  $-OC(=O)NR^mR^m$ ,  $-OC(=O)N(R^m)S(=O)R^n$ ,  $-OC_{2-6}alkylNR^mR^m$ ,  $-OC_{2-6}alkylOR^m$ ,  $-SR^m$ ,  $-S(=O)R^n$ ,  $-S(=O)_2R^n$ ,  $-S(=O)_2NR^mR^m$ ,  $-S(=O)_2N(R^m)C(=O)R^n$ ,  $-S(=O)_2N(R^m)C(=O)OR^n$ ,  $-S(=O)_2N(R^m)C(=O)NR^mR^m$ ,  $-NR^mR^m$ ,  $-N(R^m)C(=O)R^n$ ,  $-N(R^m)C(=O)OR^n$ ,  $-N(R^m)C(=O)NR^mR^m$ ,  $-N(R^m)C(=NR^m)NR^mR^m$ ,  $-N(R^m)S(=O)_2R^n$ ,  $-N(R^m)S(=O)NR^mR^m$ ,  $-N(R^m)C(=O)OR^s$ ,  $-N(R^m)C(=O)NR^mR^s$ ,  $-N(R^m)C(=NR^m)NR^mR^s$ ,  $-N(R^m)S(=O)R^s$ ,  $-N(R^m)S(=O)NR^mR^s$ ,  $-N(R^m)C(=O)OR^s$ ,  $-N(R^m)C(=O)NR^mR^s$ ,  $-N(R^m)C(=NR^m)NR^mR^s$ ,  $-N(R^m)S(=O)_2R^s$ ,  $-N(R^m)S(=O)NR^mR^s$ ,  $-NR^mC_{2-6}alkylNR^mR^s$ ,  $-NR^mC_{2-6}alkylOR^s$ ,  $-C(=O)R^s$ ,  $-C(=O)OR^s$ ,  $-C(=NR^m)NR^mR^s$ ,  $-OR^s$ ,  $-OC(=O)R^s$ ,  $-OC(=O)NR^mR^s$ ,  $-OC(=O)N(R^m)S(=O)R^n$ ,  $-OC_{2-6}alkylNR^mR^m$ , and  $C_{1-4}alkyl$  substituted by 1 or 2 groups selected from  $C_{1-2}haloalkyl$ , halo, cyano, nitro,  $-C(=O)R^n$ ,  $-C(=O)OR^n$ ,  $-C(=O)NR^mR^m$ ,  $-C(=NR^m)NR^mR^m$ ,  $-OR^m$ ,  $-OC(=O)R^n$ ,  $-OC(=O)NR^mR^m$ ,  $-OC(=O)N(R^m)S(=O)R^n$ ,  $-OC_{2-6}alkylNR^mR^m$ ,

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- OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- 5 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>,
- C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>,
- OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>,
- S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>,
- 10 -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>,
- N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup>; and the ring and bridge carbon atoms are substituted with 0, 1 or 2 =O groups; but in no instance is R<sup>4</sup> 3,5-difluoromethylphenyl or 3-trifluoromethyl-4-fluorophenyl;
- 15 R<sup>5</sup> is independently, at each instance, H, C<sub>1-5</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo,
- nitro, cyano, -OC<sub>1-6</sub>alkyl, -OC<sub>1-4</sub>haloalkyl, -OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -OC<sub>2-6</sub>alkylOR<sup>d</sup>,
- NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>1-4</sub>haloalkyl, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>, naphthyl,
- CO<sub>2</sub>(C<sub>1-6</sub>alkyl), -C(=O)(C<sub>1-6</sub>alkyl), -C(=O)NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C(=O)R<sup>d</sup>,
- NR<sup>d</sup>C(=O)NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>CO<sub>2</sub>(C<sub>1-6</sub>alkyl), -C<sub>1-8</sub>alkylOR<sup>d</sup>, -C<sub>1-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>,
- S(=O)<sub>n</sub>(C<sub>1-6</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>S(=O)<sub>2</sub>(C<sub>1-6</sub>alkyl), -OC(=O)NR<sup>d</sup>R<sup>d</sup>, a
- 20 phenyl ring substituted with 0, 1, 2, or 3 substituents independently selected from R<sup>10</sup>; or R<sup>5</sup> is a saturated or unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 atoms selected from O, N and S, substituted with 0, 1, 2, or 3 substituents independently selected from R<sup>10</sup>;
- R<sup>6</sup> is independently, at each instance, H, C<sub>1-5</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo,
- 25 -OC<sub>1-6</sub>alkyl, -OC<sub>1-4</sub>haloalkyl, -OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -OC<sub>2-6</sub>alkylOR<sup>d</sup>, -NR<sup>d</sup>R<sup>d</sup>,
- NR<sup>d</sup>C<sub>1-4</sub>haloalkyl, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup> or -NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>, -C<sub>1-8</sub>alkylOR<sup>d</sup>,
- C<sub>1-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -S(C<sub>1-6</sub>alkyl), a phenyl ring substituted with 1, 2, or 3 substituents independently selected from R<sup>10</sup>; or R<sup>6</sup> is a saturated or unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 atoms selected from O, N
- 30 and S substituted with 0, 1, 2, or 3 substituents independently selected from R<sup>10</sup>;
- R<sup>7</sup> is independently, at each instance, H, C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl,
- halo, -OC<sub>1-6</sub>alkyl, -OC<sub>1-4</sub>haloalkyl, -OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -OC<sub>2-6</sub>alkylOR<sup>d</sup>,

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- NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>1-4</sub>haloalkyl, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>,  
 -C<sub>1-8</sub>alkylOR<sup>d</sup>, -C<sub>1-6</sub>alkylNR<sup>d</sup>R<sup>d</sup> or -S(C<sub>1-6</sub>alkyl); or R<sup>7</sup> is a saturated or  
 unsaturated 4- or 5-membered ring heterocycle containing a single  
 nitrogen atom, wherein the ring is substituted with 0, 1 or 2 substituents
- 5 independently selected from halo, C<sub>1-2</sub>haloalkyl and C<sub>1-3</sub>alkyl;
- R<sup>8</sup> is independently, at each instance, H, C<sub>1-5</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo,  
 -OC<sub>1-6</sub>alkyl, -OC<sub>1-4</sub>haloalkyl, -OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -OC<sub>2-6</sub>alkylOR<sup>d</sup>, -NR<sup>d</sup>R<sup>d</sup>,  
 -NR<sup>d</sup>C<sub>1-4</sub>haloalkyl, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>, -C<sub>1-8</sub>alkylOR<sup>d</sup>,  
 -C<sub>1-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -S(C<sub>1-6</sub>alkyl), a phenyl ring substituted with 1, 2, or 3
- 10 substituents independently selected from R<sup>10</sup>, or R<sup>8</sup> is a saturated or unsaturated 5-  
 or 6-membered ring heterocycle containing 1, 2 or 3 atoms selected from O, N  
 and S substituted with 0, 1, 2, or 3 substituents independently selected from R<sup>10</sup>;
- R<sup>9</sup> is independently, at each instance, H, C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl,  
 halo, nitro, cyano, -OC<sub>1-6</sub>alkyl, -OC<sub>1-4</sub>haloalkyl, -OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>,  
 -OC<sub>2-6</sub>alkylOR<sup>d</sup>, -NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>1-4</sub>haloalkyl, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup> or  
 -NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>, -CO<sub>2</sub>(C<sub>1-6</sub>alkyl), -C(=O)(C<sub>1-6</sub>alkyl), -C(=O)NR<sup>d</sup>R<sup>d</sup>,  
 -NR<sup>d</sup>C(=O)(C<sub>1-6</sub>alkyl), -NR<sup>d</sup>C(=O)NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>CO<sub>2</sub>(C<sub>1-6</sub>alkyl),  
 -C<sub>1-8</sub>alkylOR<sup>d</sup>, -C<sub>1-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -S(=O)<sub>n</sub>(C<sub>1-6</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>,  
 -NR<sup>d</sup>S(=O)<sub>2</sub>(C<sub>1-6</sub>alkyl), -OC(=O)NR<sup>d</sup>R<sup>d</sup> or a -(CR<sup>q</sup>R<sup>q</sup>)<sub>o</sub>phenyl wherein the  
 20 phenyl is substituted with 0, 1, 2, or 3 substituents independently selected  
 from R<sup>10</sup>; or R<sup>9</sup> is -(CR<sup>q</sup>R<sup>q</sup>)<sub>o</sub>Het wherein Het is a saturated or unsaturated  
 5- or 6-membered ring heterocycle containing 1, 2 or 3 atoms selected  
 from O, N and S substituted with 0, 1, 2, or 3 substituents independently  
 selected from R<sup>10</sup>; or R<sup>9</sup> is a saturated or unsaturated 4- or 5-membered  
 25 ring heterocycle containing a single nitrogen atom, wherein the ring is  
 substituted with 0, 1 or 2 substituents independently selected from halo,  
 C<sub>1-2</sub>haloalkyl and C<sub>1-3</sub>alkyl; wherein at least one of R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup>, R<sup>8</sup> and R<sup>9</sup>  
 is C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, -OC<sub>1-4</sub>haloalkyl, -OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>,  
 -OC<sub>2-6</sub>alkylOR<sup>d</sup>, -NR<sup>d</sup>C<sub>1-4</sub>haloalkyl, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>,  
 30 -NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>, -C<sub>1-8</sub>alkylOR<sup>d</sup>, -C<sub>1-6</sub>alkylNR<sup>d</sup>R<sup>d</sup> or -S(C<sub>1-6</sub>alkyl);  
 R<sup>10</sup> is independently, at each instance, selected from H, C<sub>1-8</sub>alkyl,  
 C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl),

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- C(=O)NR<sup>d</sup>R<sup>d</sup>, -C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>, -OR<sup>d</sup>, -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>d</sup>R<sup>d</sup>,
- OC(=O)N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -OC<sub>2-6</sub>alkylOR<sup>d</sup>, -SR<sup>d</sup>,
- S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>,
- S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl),
- 5 -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl),
- N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>,
- N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup> and
- NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>; or R<sup>10</sup> is a saturated or unsaturated 5-, 6- or 7-membered monocyclic or 6-, 7-, 8-, 9-, 10- or 11-membered bicyclic ring containing 1, 2 or 3 atoms selected from N, O and S, wherein the ring is fused with 0 or 1 benzo groups and 0 or 1 saturated or unsaturated 5-, 6- or 7-membered heterocyclic ring containing 1, 2 or 3 atoms selected from N, O and S; wherein the carbon atoms of the ring are substituted by 0, 1 or 2 oxo groups, wherein the ring is substituted by 0, 1, 2 or 3 groups selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro,
- 10 15 -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl), -C(=O)NR<sup>d</sup>R<sup>d</sup>, -C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>, -OR<sup>d</sup>,
- OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>d</sup>R<sup>d</sup>, -OC(=O)N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl),
- OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -OC<sub>2-6</sub>alkylOR<sup>d</sup>, -SR<sup>d</sup>, -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl),
- S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl),
- S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl),
- 20 25 -N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>,
- N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup> and
- NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>; or R<sup>10</sup> is C<sub>1-4</sub>alkyl substituted by 0, 1, 2 or 3 groups selected from C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl),
- C(=O)NR<sup>d</sup>R<sup>d</sup>, -C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>, -OR<sup>d</sup>, -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>d</sup>R<sup>d</sup>,
- 25 30 -OC(=O)N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -OC<sub>2-6</sub>alkylOR<sup>d</sup>, -SR<sup>d</sup>,
- S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>,
- S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl),
- S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl),
- N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>,
- N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup> and
- NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>;

R<sup>d</sup> is independently, at each instance, H, phenyl, benzyl or C<sub>1-6</sub>alkyl;

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R<sup>e</sup> is a heterocycle selected from the group of thiophene, pyrrole,  
1,3-oxazole, 1,3-thiazole, 1,3,4-oxadiazole, 1,3,4-thiadiazole, 1,2,3-oxadiazole,  
1,2,3-thiadiazole, 1H-1,2,3-triazole, isothiazole, 1,2,4-oxadiazole, 1,2,4-  
thiadiazole, 1,2,3,4-oxatriazole, 1,2,3,4-thatriazole, 1H-1,2,3,4-tetraazole,  
5 1,2,3,5-oxatriazole, 1,2,3,5-thatriazole, furan, imidazol-1-yl, imidazol-4-yl, 1,2,4-  
triazol-4-yl, 1,2,4-triazol-5-yl, isoxazol-3-yl, isoxazol-5-yl, pyrazol-3-yl, pyrazol-  
5-yl, thiolane, pyrrolidine, tetrahydrofuran, 4,5-dihydrothiophene, 2-pyrroline,  
4,5-dihydrofuran, pyridazine, pyrimidine, pyrazine, 1,2,3-triazine, 1,2,4-triazine,  
1,2,4-triazine, 1,3,5-triazine, pyridine, 2H-3,4,5,6-tetrahydropyran, thiane, 1,2-  
10 diazaperhydroine, 1,3-diazaperhydroine, piperazine, 1,3-oxazaperhydroine,  
morpholine, 1,3-thiazaperhydroine, 1,4-thiazaperhydroine, piperidine, 2H-3,4-  
dihydropyran, 2,3-dihydro-4H-thiin, 1,4,5,6-tetrahydropyridine, 2H-5,6-  
dihydropyran, 2,3-dihydro-6H-thiin, 1,2,5,6-tetrahydropyridine, 3,4,5,6-  
tetrahydropyridine, 4H-pyran, 4H-thiin, 1,4-dihydropyridine, 1,4-dithiane, 1,4-  
15 dioxane, 1,4-oxathiane, 1,2-oxazolidine, 1,2-thiazolidine, pyrazolidine, 1,3-  
oxazolidine, 1,3-thiazolidine, imidazolidine, 1,2,4-oxadiazolidine, 1,3,4-  
oxadiazolidine, 1,2,4-thiadiazolidine, 1,3,4-thiadiazolidine, 1,2,4-triazolidine, 2-  
imidazoline, 3-imidazoline, 2-pyrazoline, 4-imidazoline, 2,3-dihydroisothiazole,  
4,5-dihydroisoxazole, 4,5-dihydroisothiazole, 2,5-dihydroisoxazole, 2,5-  
20 dihydroisothiazole, 2,3-dihydroisoxazole, 4,5-dihydrooxazole, 2,3-  
dihydrooxazole, 2,5-dihydrooxazole, 4,5-dihydrothiazole, 2,3-dihydrothiazole,,  
2,5-dihydrothiazole, 1,3,4-oxathiazolidine, 1,4,2-oxathiazolidine, 2,3-dihydro-1H-[1,2,3]triazole, 2,5-dihydro-1H-[1,2,3]triazole, 4,5-dihydro-1H-[1,2,3]triazole,  
2,3-dihydro-1H-[1,2,4]triazole, 4,5-dihydro-1H-[1,2,4]triazole, 2,3-dihydro-  
25 [1,2,4]oxadiazole, 2,5-dihydro-[1,2,4]oxadiazole, 4,5-dihydro-[1,2,4]thiadiazole,  
2,3-dihydro-[1,2,4] thidiazole, 2,5-dihydro-[1,2,4] thiadiazole, 4,5-dihydro-[1,2,4]  
thiadiazole, 2,5-dihydro-[1,2,4]oxadiazole, 2,3-dihydro-[1,2,4]oxadiazole, 4,5-  
dihydro-[1,2,4]oxadiazole, 2,5-dihydro-[1,2,4]thiadiazole, 2,3-dihydro-[1,2,4]  
thiadiazole, 4,5-dihydro-[1,2,4] thiadiazole, 2,3-dihydro-[1,3,4]oxadiazole, 2,3-  
30 dihydro-[1,3,4]thiadiazole, [1,4,2]oxathiazole, [1,3,4]oxathiazole, 1,3,5-  
triazaperhydroine, 1,2,4-triazaperhydroine, 1,4,2-dithiazaperhydroine, 1,4,2-  
dioxazaperhydroine, 1,3,5-oxadiazaperhydroine, 1,2,5-oxadiazaperhydroine,

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1,3,4-thiadiazaperhydroine, 1,3,5-thiadiazaperhydroine, 1,2,5-thiadiazaperhydroine, 1,3,4-oxadiazaperhydroine, 1,4,3-oxathiazaperhydroine,  
1,4,2-oxathiazaperhydroine, 1,4,5,6-tetrahydropyridazine, 1,2,3,4-tetrahydropyridazine, 1,2,3,6-tetrahydropyridazine, 1,2,5,6-tetrahydropyrimidine,  
5 1,2,3,4-tetrahydropyrimidine, 1,4,5,6-tetrahydropyrimidine, 1,2,3,6-tetrahydropyrazine, 1,2,3,4-tetrahydropyrazine, 5,6-dihydro-4H-[1,2]oxazine, 5,6-dihydro-2H-[1,2]oxazine, 3,6-dihydro-2H-[1,2]oxazine, 3,4-dihydro-2H-[1,2]oxazine, 5,6-dihydro-4H-[1,2]thiazine, 5,6-dihydro-2H-[1,2] thiazine, 3,6-dihydro-2H-[1,2] thiazine, 3,4-dihydro-2H-[1,2] thiazine, 5,6-dihydro-2H-[1,3]oxazine, 5,6-dihydro-4H-[1,3]oxazine, 3,6-dihydro-2H-[1,3]oxazine, 3,4-dihydro-2H-[1,4]oxazine, 3,4-dihydro-2H-[1,4]oxazine, 5,6-dihydro-2H-[1,3]thiazine, 5,6-dihydro-4H-[1,3]thiazine, 3,6-dihydro-2H-[1,3]thiazine, 3,4-dihydro-2H-[1,3]thiazine, 3,6-dihydro-2H-[1,4]thiazine, 3,4-dihydro-2H-[1,4]thiazine, 1,2,3,6-tetrahydro-[1,2,4]triazine,  
10 1,2,3,4-tetrahydro-[1,2,4]triazine, 1,2,3,4-tetrahydro-[1,3,5]triazine, 2,3,4,5-tetrahydro-[1,2,4]triazine, 1,4,5,6-tetrahydro-[1,2,4]triazine, 5,6-dihydro-[1,4,2]dioxazine, 5,6-dihydro-[1,4,2]dioxazine, 5,6-dihydro-[1,4,2]dithiazine, 2,3-dihydro-[1,4,2]dioxazine, 3,4-dihydro-2H-[1,3,4]oxadiazine, 3,6-dihydro-2H-[1,3,4]oxadiazine, 5,6-dihydro-2H-[1,3,5]oxadiazine, 5,6-dihydro-4H-[1,2,5]oxadiazine, 5,6-dihydro-2H-[1,3,4]thiadiazine, 3,6-dihydro-2H-[1,3,4]thiadiazine, 3,4-dihydro-2H-[1,3,5]thiadiazine, 3,6-dihydro-2H-[1,3,5]thiadiazine, 5,6-dihydro-2H-[1,2,5]thiadiazine, 5,6-dihydro-4H-[1,2,5]thiadiazine, 5,6-dihydro-2H-[1,2,3]oxadiazine, 3,6-dihydro-2H-[1,2,5]oxadiazine, 5,6-dihydro-4H-[1,3,4]oxadiazine, 3,4-dihydro-2H-[1,2,5]thiadiazine, 5,6-dihydro-2H-[1,4,3]oxathiazine, 5,6-dihydro-[1,4,2]oxathiazine, 2,3-dihydro-[1,4,3]oxathiazine, 2,3-dihydro-[1,4,2]oxathiazine, 4,5-dihydropyridine, 1,6-dihydropyridine, 5,6-dihydropyridine, 2H-pyran, 2H-thiin,  
25 3,6-dihydropyridine, 2,3-dihydropyridazine, 2,5-dihydropyridazine, 4,5-dihydropyridazine, 1,2-dihydropyridazine, 2,3-dihydropyrimidine, 2,5-

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dihydropyrimidine, 5,6-dihydropyrimidine, 3,6-dihydropyrimidine, 4,5-dihydropyrazine, 5,6-dihydropyrazine, 3,6-dihydropyrazine, 4,5-dihydropyrazine, 1,4-dihydropyrazine, 1,4-dithiin, 1,4-dioxin, 2H-1,2-oxazine, 6H-1,2-oxazine, 4H-1,2-oxazine, 2H-1,3-oxazine, 4H-1,3-oxazine, 6H-1,3-oxazine, 2H-1,4-oxazine, 4H-1,4-oxazine, 2H-1,3-thiazine, 2H-1,4-thiazine, 4H-1,2-thiazine, 6H-1,3-thiazine, 4H-1,4-thiazine, 2H-1,2-thiazine, 6H-1,2-thiazine, 1,4-oxathiin, 2H,5H-1,2,3-triazine, 1H,4H-1,2,3-triazine, 4,5-dihydro-1,2,3-triazine, 1H,6H-1,2,3-triazine, 1,2-dihydro-1,2,3-triazine, 2,3-dihydro-1,2,4-triazine, 3H,6H-1,2,4-triazine, 1H,6H-1,2,4-triazine, 3,4-dihydro-1,2,4-triazine, 1H,4H-1,2,4-triazine, 5,6-dihydro-1,2,4-triazine, 4,5-dihydro-1,2,4-triazine, 2H,5H-1,2,4-triazine, 1,2-dihydro-1,2,4-triazine, 1H,4H-1,3,5-triazine, 1,2-dihydro-1,3,5-triazine, 1,4,2-dithiazine, 1,4,2-dioxazine, 2H-1,3,4-oxadiazine, 2H-1,3,5-oxadiazine, 6H-1,2,5-oxadiazine, 4H-1,3,4-oxadiazine, 4H-1,3,5-oxadiazine, 4H-1,2,5-oxadiazine, 2H-1,3,5-thiadiazine, 6H-1,2,5-thiadiazine, 4H-1,3,4-thiadiazine, 4H-1,3,5-thiadiazine, 4H-1,2,5-thiadiazine, 2H-1,3,4-thiadiazine, 6H-1,3,4-thiadiazine, 6H-1,3,4-oxadiazine and 1,4,2-oxathiazine, wherein the heterocycle is optionally vicinally fused with a saturated or unsaturated 5-, 6- or 7-membered ring containing 0, 1 or 2 atoms independently selected from N, O and S;

R<sup>f</sup> is phenyl substituted by 0, 1 or 2 groups selected from halo, C<sub>1-4</sub>alkyl, C<sub>1-3</sub>haloalkyl, -OR<sup>d</sup> and -NR<sup>d</sup>R<sup>d</sup>; or R<sup>f</sup> is a saturated or unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 heteroatoms independently selected from N, O and S, wherein no more than 2 of the ring members are O or S, wherein the heterocycle is optionally fused with a phenyl ring, and the carbon atoms of the heterocycle are substituted by 0, 1 or 2 oxo groups, wherein the heterocycle or fused phenyl ring is substituted by 0, 1, 2 or 3 substituents selected from halo, C<sub>1-4</sub>alkyl, C<sub>1-3</sub>haloalkyl, -OR<sup>d</sup> and -NR<sup>d</sup>R<sup>d</sup>;

R<sup>g</sup> is hydrogen or -CH<sub>3</sub>;

R<sup>m</sup> is independently at each instance H or R<sup>n</sup>;

R<sup>n</sup> is independently at each instance C<sub>1-8</sub>alkyl, phenyl or benzyl;

R<sup>q</sup> is independently in each instance H, C<sub>1-4</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>,

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- OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- 5 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; and

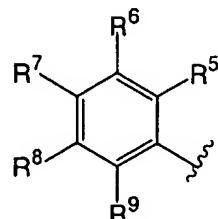
R<sup>s</sup> is R<sup>n</sup> substituted by 0, 1, 2 or 3 substituents independently selected from R<sup>q</sup>.

36. The compound according to any one of Claim 35, wherein Y is  
10 NH.

37. The compound according to any one of Claim 35, wherein Y is O.

38. The compound according to any one of Claim 35, wherein Y is S.

15 39. The compound according to any one of Claim 35, wherein R<sup>1</sup> is



40. The compound according to Claim 39, wherein R<sup>7</sup> is C<sub>1-5</sub>alkyl,  
20 halo or C<sub>1-4</sub>haloalkyl.

41. The compound according to Claim 35, wherein R<sup>1</sup> is a naphthyl  
substituted by 0, 1, 2 or 3 substituents independently selected from R<sup>5</sup>.

25 42. The compound according to Claim 35, wherein R<sup>1</sup> is R<sup>c</sup> substituted  
by 1, 2 or 3 substituents independently selected from R<sup>5</sup>;

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43. The compound according to Claim 35, wherein R<sup>15</sup> is -(CH<sub>2</sub>)<sub>n</sub>phenyl substituted by 0, 1, 2 or 3 substituents independently selected from R<sup>10</sup>.

5 44. The compound according to Claim 35, wherein R<sup>15</sup> is a saturated or unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 heteroatoms independently selected from N, O and S, wherein no more than 2 of the ring members are O or S, wherein the heterocycle is optionally fused with a phenyl ring, and the heterocycle or fused phenyl ring is substituted by 0, 1, 2 or 3 substituents independently selected from R<sup>10</sup>.  
10

45. The compound according to Claim 35, wherein R<sup>15</sup> is C<sub>1-8</sub>alkyl substituted by 0, 1 or 2 substituents selected from R<sup>10</sup>.

15 46. The compound according to Claim 35, wherein R<sup>15</sup> is selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl), -C(=O)NR<sup>d</sup>R<sup>d</sup>, -C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>, -OR<sup>d</sup>, -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>d</sup>R<sup>d</sup>, -OC(=O)N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -OC<sub>2-6</sub>alkylOR<sup>d</sup>, -SR<sup>d</sup>, -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)NR<sup>d</sup>R<sup>d</sup>,  
20 -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=O)(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)C(=O)NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>, -N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>d</sup>)S(=O)NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup> and -NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>; or R<sup>10</sup> is a saturated or unsaturated 5-, 6- or 7-membered  
25 monocyclic or 6-, 7-, 8-, 9-, 10- or 11-membered bicyclic ring containing 1, 2 or 3 atoms selected from N, O and S, wherein the ring is fused with 0 or 1 benzo groups and 0 or 1 saturated or unsaturated 5-, 6- or 7-membered heterocyclic ring containing 1, 2 or 3 atoms selected from N, O and S; wherein the carbon atoms of the ring are substituted by 0, 1 or 2 oxo groups, wherein the ring is substituted by  
30 0, 1, 2 or 3 groups selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl), -C(=O)NR<sup>d</sup>R<sup>d</sup>, -C(=NR<sup>d</sup>)NR<sup>d</sup>R<sup>d</sup>, -OR<sup>d</sup>, -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>d</sup>R<sup>d</sup>, -OC(=O)N(R<sup>d</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl),

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$-\text{OC}_{2-6}\text{alkylNR}^d\text{R}^d$ ,  $-\text{OC}_{2-6}\text{alkylOR}^d$ ,  $-\text{SR}^d$ ,  $-\text{S(=O)(C}_{1-8}\text{alkyl)}$ ,  $-\text{S(=O)}_2(\text{C}_{1-8}\text{alkyl})$ ,  
 $-\text{S(=O)}_2\text{NR}^d\text{R}^d$ ,  $-\text{S(=O)}_2\text{N(R}^d\text{)C(=O)(C}_{1-8}\text{alkyl)}$ ,  $-\text{S(=O)}_2\text{N(R}^d\text{)C(=O)O(C}_{1-8}\text{alkyl)}$ ,  
 $-\text{S(=O)}_2\text{N(R}^d\text{)C(=O)NR}^d\text{R}^d$ ,  $-\text{NR}^d\text{R}^d$ ,  $-\text{N(R}^d\text{)C(=O)(C}_{1-8}\text{alkyl)}$ ,  
 $-\text{N(R}^d\text{)C(=O)O(C}_{1-8}\text{alkyl)}$ ,  $-\text{N(R}^d\text{)C(=O)NR}^d\text{R}^d$ ,  $-\text{N(R}^d\text{)C(=NR}^d\text{)NR}^d\text{R}^d$ ,  
5     $-\text{N(R}^d\text{)S(=O)}_2(\text{C}_{1-8}\text{alkyl})$ ,  $-\text{N(R}^d\text{)S(=O)}_2\text{NR}^d\text{R}^d$ ,  $-\text{NR}^d\text{C}_{2-6}\text{alkylNR}^d\text{R}^d$  and  
 $-\text{NR}^d\text{C}_{2-6}\text{alkylOR}^d$ ; or  $\text{R}^{10}$  is  $\text{C}_{1-4}\text{alkyl}$  substituted by 0, 1, 2 or 3 groups selected  
from  $\text{C}_{1-4}\text{haloalkyl}$ , halo, cyano, nitro,  $-\text{C(=O)(C}_{1-8}\text{alkyl)}$ ,  $-\text{C(=O)O(C}_{1-8}\text{alkyl)}$ ,  
 $-\text{C(=O)NR}^d\text{R}^d$ ,  $-\text{C(=NR}^d\text{)NR}^d\text{R}^d$ ,  $-\text{OR}^d$ ,  $-\text{OC(=O)(C}_{1-8}\text{alkyl)}$ ,  $-\text{OC(=O)NR}^d\text{R}^d$ ,  
 $-\text{OC(=O)N(R}^d\text{)S(=O)}_2(\text{C}_{1-8}\text{alkyl})$ ,  $-\text{OC}_{2-6}\text{alkylNR}^d\text{R}^d$ ,  $-\text{OC}_{2-6}\text{alkylOR}^d$ ,  $-\text{SR}^d$ ,  
10    $-\text{S(=O)(C}_{1-8}\text{alkyl)}$ ,  $-\text{S(=O)}_2(\text{C}_{1-8}\text{alkyl})$ ,  $-\text{S(=O)}_2\text{NR}^d\text{R}^d$ ,  
 $-\text{S(=O)}_2\text{N(R}^d\text{)C(=O)(C}_{1-8}\text{alkyl})$ ,  $-\text{S(=O)}_2\text{N(R}^d\text{)C(=O)O(C}_{1-8}\text{alkyl})$ ,  
 $-\text{S(=O)}_2\text{N(R}^d\text{)C(=O)NR}^d\text{R}^d$ ,  $-\text{NR}^d\text{R}^d$ ,  $-\text{N(R}^d\text{)C(=O)(C}_{1-8}\text{alkyl)}$ ,  
 $-\text{N(R}^d\text{)C(=O)O(C}_{1-8}\text{alkyl})$ ,  $-\text{N(R}^d\text{)C(=O)NR}^d\text{R}^d$ ,  $-\text{N(R}^d\text{)C(=NR}^d\text{)NR}^d\text{R}^d$ ,  
 $-\text{N(R}^d\text{)S(=O)}_2(\text{C}_{1-8}\text{alkyl})$ ,  $-\text{N(R}^d\text{)S(=O)}_2\text{NR}^d\text{R}^d$ ,  $-\text{NR}^d\text{C}_{2-6}\text{alkylNR}^d\text{R}^d$  and  
15    $-\text{NR}^d\text{C}_{2-6}\text{alkylOR}^d$ .

20      47. The compound according to Claim 35, wherein  $\text{R}^{16}$  is,  
independently, in each instance, halo,  $-\text{NH}_2$ ,  $-\text{NHC}_{1-3}\text{alkyl}$ ,  $-\text{N(C}_{1-3}\text{alkyl)C}_{1-3}\text{alkyl}$   
or  $\text{C}_{1-3}\text{alkyl}$ .

25      48. The compound according to Claim 35, wherein  $\text{R}^4$  is an  
unsaturated 6-membered ring containing 0 atoms selected from O, N and S that is  
vicinally fused with a saturated or unsaturated 3- or 4-atom bridge containing 0, 1,  
2 or 3 atoms selected from O, N and S with the remaining atoms being carbon, so  
long as the combination of O and S atoms is not greater than 2, wherein the ring  
and bridge are substituted by 0, 1, 2 or 3 substituents independently selected from  
 $\text{C}_{1-8}\text{alkyl}$ ,  $\text{C}_{1-4}\text{haloalkyl}$ , halo, cyano, nitro,  $-\text{C(=O)R}^n$ ,  $-\text{C(=O)OR}^n$ ,  
 $-\text{C(=O)NR}^m\text{R}^m$ ,  $-\text{C(=NR}^m\text{)NR}^m\text{R}^m$ ,  $-\text{OR}^m$ ,  $-\text{OC(=O)R}^n$ ,  $-\text{OC(=O)NR}^m\text{R}^m$ ,  
 $-\text{OC(=O)N(R}^m\text{)S(=O)}_2\text{R}^n$ ,  $-\text{OC}_{2-6}\text{alkylNR}^m\text{R}^m$ ,  $-\text{OC}_{2-6}\text{alkylOR}^m$ ,  $-\text{SR}^m$ ,  $-\text{S(=O)R}^n$ ,  
30    $-\text{S(=O)}_2\text{R}^n$ ,  $-\text{S(=O)}_2\text{NR}^m\text{R}^m$ ,  $-\text{S(=O)}_2\text{N(R}^m\text{)C(=O)R}^n$ ,  $-\text{S(=O)}_2\text{N(R}^m\text{)C(=O)OR}^n$ ,  
 $-\text{S(=O)}_2\text{N(R}^m\text{)C(=O)NR}^m\text{R}^m$ ,  $-\text{NR}^m\text{R}^m$ ,  $-\text{N(R}^m\text{)C(=O)R}^n$ ,  $-\text{N(R}^m\text{)C(=O)OR}^n$ ,  
 $-\text{N(R}^m\text{)C(=O)NR}^m\text{R}^m$ ,  $-\text{N(R}^m\text{)C(=NR}^m\text{)NR}^m\text{R}^m$ ,  $-\text{N(R}^m\text{)S(=O)}_2\text{R}^n$ ,

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$\begin{aligned} & \text{-N(R}^{\text{m}}\text{)S(=O)}_2\text{NR}^{\text{m}}\text{R}^{\text{m}}, \text{-NR}^{\text{m}}\text{C}_{2\text{-6alkyl}}\text{NR}^{\text{m}}\text{R}^{\text{m}}, \text{-NR}^{\text{m}}\text{C}_{2\text{-6alkyl}}\text{OR}^{\text{m}}, \text{-C(=O)R}^{\text{s}}, \\ & \text{-C(=O)OR}^{\text{s}}, \text{-C(=O)NR}^{\text{m}}\text{R}^{\text{s}}, \text{-C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{s}}, \text{-OR}^{\text{s}}, \text{-OC(=O)R}^{\text{s}}, \\ & \text{-OC(=O)NR}^{\text{m}}\text{R}^{\text{s}}, \text{-OC(=O)N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{s}}, \text{-OC}_{2\text{-6alkyl}}\text{NR}^{\text{m}}\text{R}^{\text{s}}, \text{-OC}_{2\text{-6alkyl}}\text{OR}^{\text{s}}, \\ & \text{-SR}^{\text{s}}, \text{-S(=O)R}^{\text{s}}, \text{-S(=O)}_2\text{R}^{\text{s}}, \text{-S(=O)}_2\text{NR}^{\text{m}}\text{R}^{\text{s}}, \text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)R}^{\text{s}}, \\ 5 & \text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)OR}^{\text{s}}, \text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{s}}, \text{-NR}^{\text{m}}\text{R}^{\text{s}}, \text{-N(R}^{\text{m}}\text{)C(=O)R}^{\text{s}}, \\ & \text{-N(R}^{\text{m}}\text{)C(=O)OR}^{\text{s}}, \text{-N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{s}}, \text{-N(R}^{\text{m}}\text{)C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{s}}, \\ & \text{-N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{s}}, \text{-N(R}^{\text{m}}\text{)S(=O)}_2\text{NR}^{\text{m}}\text{R}^{\text{s}}, \text{-NR}^{\text{m}}\text{C}_{2\text{-6alkyl}}\text{NR}^{\text{m}}\text{R}^{\text{s}}, \text{-NR}^{\text{m}}\text{C}_{2\text{-6alkyl}}\text{OR}^{\text{s}} \\ & \text{and C}_{1\text{-4alkyl}} \text{ substituted by 1 or 2 groups selected from C}_{1\text{-2haloalkyl}}, \text{halo,} \\ & \text{cyano, nitro, -C(=O)R}^{\text{n}}, \text{-C(=O)OR}^{\text{n}}, \text{-C(=O)NR}^{\text{m}}\text{R}^{\text{m}}, \text{-C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{m}}, \text{-OR}^{\text{m}}, \\ 10 & \text{-OC(=O)R}^{\text{n}}, \text{-OC(=O)NR}^{\text{m}}\text{R}^{\text{m}}, \text{-OC(=O)N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{n}}, \text{-OC}_{2\text{-6alkyl}}\text{NR}^{\text{m}}\text{R}^{\text{m}}, \\ & \text{-OC}_{2\text{-6alkyl}}\text{OR}^{\text{m}}, \text{-SR}^{\text{m}}, \text{-S(=O)R}^{\text{n}}, \text{-S(=O)}_2\text{R}^{\text{n}}, \text{-S(=O)}_2\text{NR}^{\text{m}}\text{R}^{\text{m}}, \\ & \text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)R}^{\text{n}}, \text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)OR}^{\text{n}}, \text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{m}}, \\ & \text{-NR}^{\text{m}}\text{R}^{\text{m}}, \text{-N(R}^{\text{m}}\text{)C(=O)R}^{\text{n}}, \text{-N(R}^{\text{m}}\text{)C(=O)OR}^{\text{n}}, \text{-N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{m}}, \\ & \text{-N(R}^{\text{m}}\text{)C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{m}}, \text{-N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{n}}, \text{-N(R}^{\text{m}}\text{)S(=O)}_2\text{NR}^{\text{m}}\text{R}^{\text{m}}, \\ 15 & \text{-NR}^{\text{m}}\text{C}_{2\text{-6alkyl}}\text{NR}^{\text{m}}\text{R}^{\text{m}}, \text{-NR}^{\text{m}}\text{C}_{2\text{-6alkyl}}\text{OR}^{\text{m}}, \text{-C(=O)R}^{\text{s}}, \text{-C(=O)OR}^{\text{s}}, \\ & \text{-C(=O)NR}^{\text{m}}\text{R}^{\text{s}}, \text{-C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{s}}, \text{-OR}^{\text{s}}, \text{-OC(=O)R}^{\text{s}}, \text{-OC(=O)NR}^{\text{m}}\text{R}^{\text{s}}, \\ & \text{-OC(=O)N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{s}}, \text{-OC}_{2\text{-6alkyl}}\text{NR}^{\text{m}}\text{R}^{\text{s}}, \text{-OC}_{2\text{-6alkyl}}\text{OR}^{\text{s}}, \text{-SR}^{\text{s}}, \text{-S(=O)R}^{\text{s}}, \\ & \text{-S(=O)}_2\text{R}^{\text{s}}, \text{-S(=O)}_2\text{NR}^{\text{m}}\text{R}^{\text{s}}, \text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)R}^{\text{s}}, \text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)OR}^{\text{s}}, \\ & \text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{s}}, \text{-NR}^{\text{m}}\text{R}^{\text{s}}, \text{-N(R}^{\text{m}}\text{)C(=O)R}^{\text{s}}, \text{-N(R}^{\text{m}}\text{)C(=O)OR}^{\text{s}}, \\ 20 & \text{-N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{s}}, \text{-N(R}^{\text{m}}\text{)C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{s}}, \text{-N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{s}}, \\ & \text{-N(R}^{\text{m}}\text{)S(=O)}_2\text{NR}^{\text{m}}\text{R}^{\text{s}}, \text{-NR}^{\text{m}}\text{C}_{2\text{-6alkyl}}\text{NR}^{\text{m}}\text{R}^{\text{s}}, \text{-NR}^{\text{m}}\text{C}_{2\text{-6alkyl}}\text{OR}^{\text{s}}; \text{and the ring and} \\ & \text{bridge carbon atoms are substituted with 0, 1 or 2 =O groups.} \end{aligned}$

$\begin{aligned} 49. \quad \text{The compound according to Claim 35, wherein R}^4 \text{ is a saturated or} \\ 25 \text{ unsaturated 5- or 6-membered ring containing 1, 2 or 3 atoms selected from O, N} \\ \text{and S that is vicinally fused with a saturated or unsaturated 3- or 4-atom bridge} \\ \text{containing 0 atoms selected from O, N and S with the remaining atoms being} \\ \text{carbon, so long as the combination of O and S atoms is not greater than 2, wherein} \\ \text{the ring and bridge are substituted by 0, 1, 2 or 3 substituents independently} \\ 30 \text{ selected from C}_{1\text{-8alkyl}}, \text{C}_{1\text{-4haloalkyl}}, \text{halo, cyano, nitro, -C(=O)R}^{\text{n}}, \text{-C(=O)OR}^{\text{n}}, \\ \text{-C(=O)NR}^{\text{m}}\text{R}^{\text{m}}, \text{-C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{m}}, \text{-OR}^{\text{m}}, \text{-OC(=O)R}^{\text{n}}, \text{-OC(=O)NR}^{\text{m}}\text{R}^{\text{m}}, \\ \text{-OC(=O)N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{n}}, \text{-OC}_{2\text{-6alkyl}}\text{NR}^{\text{m}}\text{R}^{\text{m}}, \text{-OC}_{2\text{-6alkyl}}\text{OR}^{\text{m}}, \text{-SR}^{\text{m}}, \text{-S(=O)R}^{\text{n}}, \end{aligned}$

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- S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>,
- N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>,
- N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>,
- 5 -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>,
- OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>,
- SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>,
- N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,
- 10 -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup>  
and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo,  
cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>,
- OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>,
- OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- 15 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>,
- C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>,
- 20 -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>,
- S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>,
- N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>,
- N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup>; and the ring and
- 25 bridge carbon atoms are substituted with 0, 1 or 2 =O groups; but in no instance is R<sup>4</sup> 3,5-ditrifluoromethylphenyl or 3-trifluoromethyl-4-fluorophenyl.

50. The compound according to Claim 35, wherein R<sup>4</sup> is a saturated or unsaturated 6-membered ring containing 0 atoms selected from O, N and S that is  
30 vicinally fused with a saturated or unsaturated 3- or 4-atom bridge containing 0 atoms selected from O, N and S with the remaining atoms being carbon, so long as the combination of O and S atoms is not greater than 2, wherein the ring and

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bridge are substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1</sub>-alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, 5 -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, 10 -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> 15 and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, 20 -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, 25 -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup>; and the ring and bridge carbon atoms are substituted with 0, 1 or 2 =O groups; but in no instance is 30 R<sup>4</sup> 3,5-ditrifluoromethylphenyl or 3-trifluoromethyl-4-fluorophenyl.

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51. The compound according to Claim 35, wherein R<sup>4</sup> is a saturated or unsaturated 5- or 6-membered ring containing 1, 2 or 3 atoms selected from O, N and S that is vicinally fused with a saturated or unsaturated 3- or 4-atom bridge containing 1, 2 or 3 atoms selected from O, N and S with the remaining atoms  
 5 being carbon, so long as the combination of O and S atoms is not greater than 2, wherein the ring and bridge are substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>,  
 10 -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>,  
 15 -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>,  
 20 -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>,  
 25 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>,  
 30 -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>,

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-N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>,  
-N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup>; and the ring and  
bridge carbon atoms are substituted with 0, 1 or 2 =O groups; but in no instance is  
R<sup>4</sup> 3,5-ditrifluoromethylphenyl or 3-trifluoromethyl-4-fluorophenyl.

5

52. The compound according to Claim 35, wherein R<sup>9</sup> is H.

33. The compound according to Claim 35, wherein R<sup>9</sup> is  
independently, at each instance, C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano,  
10 -OC<sub>1-6</sub>alkyl, -OC<sub>1-4</sub>haloalkyl, -OC<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -OC<sub>2-6</sub>alkylOR<sup>d</sup>, -NR<sup>d</sup>R<sup>d</sup>,  
-NR<sup>d</sup>C<sub>1-4</sub>haloalkyl, -NR<sup>d</sup>C<sub>2-6</sub>alkylNR<sup>d</sup>R<sup>d</sup> or -NR<sup>d</sup>C<sub>2-6</sub>alkylOR<sup>d</sup>, -CO<sub>2</sub>(C<sub>1-6</sub>alkyl),  
-C(=O)(C<sub>1-6</sub>alkyl), -C(=O)NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>C(=O)(C<sub>1-6</sub>alkyl), -NR<sup>d</sup>C(=O)NR<sup>d</sup>R<sup>d</sup>,  
-NR<sup>d</sup>CO<sub>2</sub>(C<sub>1-6</sub>alkyl), -C<sub>1-8</sub>alkylOR<sup>d</sup>, -C<sub>1-6</sub>alkylNR<sup>d</sup>R<sup>d</sup>, -S(=O)<sub>n</sub>(C<sub>1-6</sub>alkyl),  
-S(=O)<sub>2</sub>NR<sup>d</sup>R<sup>d</sup>, -NR<sup>d</sup>S(=O)<sub>2</sub>(C<sub>1-6</sub>alkyl) or -OC(=O)NR<sup>d</sup>R<sup>d</sup>.

15

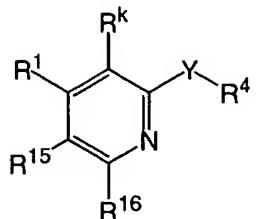
54. The compound according to Claim 35, wherein R<sup>9</sup> is a  
(CR<sup>q</sup>R<sup>q</sup>)<sub>o</sub>phenyl wherein the phenyl is substituted with 0, 1, 2, or 3 substituents  
independently selected from R<sup>10</sup>.

20

55. The compound according to Claim 35, wherein R<sup>9</sup> is -(CR<sup>q</sup>R<sup>q</sup>)<sub>o</sub>Het  
wherein Het is a saturated or unsaturated 5- or 6-membered ring heterocycle  
containing 1, 2 or 3 atoms selected from O, N and S substituted with 0, 1, 2, or 3  
substituents independently selected from R<sup>10</sup>; or R<sup>9</sup> is a saturated or unsaturated 4-  
or 5-membered ring heterocycle containing a single nitrogen atom, wherein the  
25 ring is substituted with 0, 1 or 2 substituents independently selected from halo,  
C<sub>1-2</sub>haloalkyl and C<sub>1-3</sub>alkyl.

56. A compound having the structure:

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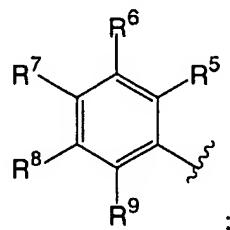


or any pharmaceutically-acceptable salt thereof, wherein:

Y is O or S;

n is independently, at each instance, 0, 1 or 2.

5        R<sup>1</sup> is



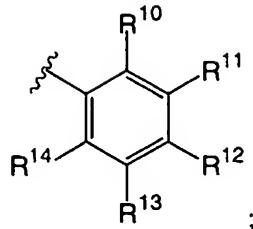
or R<sup>1</sup> is a naphthyl substituted by 0, 1, 2 or 3 substituents independently selected from R<sup>5</sup>; or R<sup>1</sup> is R<sup>i</sup> substituted by 1, 2 or 3 substituents independently selected from R<sup>5</sup>;

10      R<sup>15</sup> is, independently, in each instance, R<sup>10</sup>, C<sub>1-8</sub>alkyl substituted by 0, 1 or 2 substituents selected from R<sup>10</sup>, -(CH<sub>2</sub>)<sub>n</sub>phenyl substituted by 0, 1, 2 or 3 substituents independently selected from R<sup>10</sup>, or a saturated or unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 heteroatoms independently selected from N, O and S that is optionally vicinally fused with a saturated or 15     unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected from O, N and S with the remaining atoms being carbon, so long as the combination of O and S atoms is not greater than 2, the heterocycle and bridge being substituted by 0, 1, 2 or 3 substituents independently selected from R<sup>10</sup>;

15      R<sup>16</sup> is, independently, in each instance, H, halo, -NH<sub>2</sub>, -NHC<sub>1-3</sub>alkyl, -N(C<sub>1-3</sub>alkyl)C<sub>1-3</sub>alkyl, -OC<sub>1-3</sub>alkyl, -C<sub>1-2</sub>haloalkyl, -OC<sub>1-2</sub>haloalkyl or C<sub>1-3</sub>alkyl;

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$R^4$  is



wherein when  $R^1$  is bromophenyl, methylphenyl or trifluoromethylphenyl,  $R^4$  is not trifluoromethylphenyl or trifluoromethylhalophenyl; or  $R^4$  is a saturated or  
 5 unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 atoms selected from O, N and S, so long as the combination of O and S atoms is not greater than 2, wherein each of the carbon atoms of the heterocycle is substituted by H,  
 $C_{1-9}$ alkyl,  $C_{1-4}$ haloalkyl, halo, cyano, oxo,  $-OR^h$ ,  $-S(=O)_nC_{1-6}$ alkyl,  
 $-OC_{1-4}$ haloalkyl,  $-OC_{2-6}$ alkylNR $^hR^h$ ,  $-OC_{2-6}$ alkylOR $^h$ ,  $-OC_{1-6}$ alkylC(=O)OR $^h$ ,  
 10  $-NR^hR^h$ ,  $-NR^hC_{1-4}$ haloalkyl,  $-NR^hC_{2-6}$ alkylNR $^hR^h$ ,  $-NR^hC_{2-6}$ alkylOR $^h$ ,  
 $-C(=O)C_{1-6}$ alkyl,  $-C(=O)OC_{1-6}$ alkyl,  $-OC(=O)C_{1-6}$ alkyl,  $-C(=O)NR^hC_{1-6}$ alkyl or  
 $-NR^hC(=O)C_{1-6}$ alkyl; and saturated carbon atoms may be additionally substituted by =O; and each of the available nitrogen atoms in the heterocycle are substituted by H,  $-C_{1-6}$ alkylOR $^h$ ,  $-C_{1-6}$ alkyl,  $-C_{1-6}$ alkylNR $^hR^h$ ,  $-C_{1-3}$ alkylC(=O)OR $^h$ ,  
 15  $-C_{1-3}$ alkylC(=O)NR $^hR^h$ ,  $-C_{1-3}$ alkylOC(=O)C $_{1-6}$ alkyl,  $-C_{1-3}$ alkylNR $^hC(=O)C_{1-6}$ alkyl,  
 $-C(=O)R^j$  or  $-C_{1-3}$ alkylR $^j$ ; or  $R^4$  is an 8-, 9-, 10- or 11-membered bicyclic ring,  
 containing 0, 1, 2, 3 or 4 N atoms and 0, 1 or 2 atoms selected from S and O with  
 the remainder being carbon atoms, wherein each of the carbon atoms of the ring is  
 substituted by H,  $C_{1-9}$ alkyl,  $C_{1-4}$ haloalkyl, halo, cyano, oxo,  $-OR^h$ ,  
 20  $-S(=O)_nC_{1-6}$ alkyl,  $-OC_{1-4}$ haloalkyl,  $-OC_{2-6}$ alkylNR $^hR^h$ ,  $-OC_{2-6}$ alkylOR $^h$ ,  
 $-OC_{1-6}$ alkylC(=O)OR $^h$ ,  $-NR^hR^h$ ,  $-NR^hC_{1-4}$ haloalkyl,  $-NR^hC_{2-6}$ alkylNR $^hR^h$ ,  
 $-NR^hC_{2-6}$ alkylOR $^h$ ,  $-C(=O)C_{1-6}$ alkyl,  $-C(=O)OC_{1-6}$ alkyl,  $-OC(=O)C_{1-6}$ alkyl,  
 $-C(=O)NR^hC_{1-6}$ alkyl or  $-NR^hC(=O)C_{1-6}$ alkyl; and saturated carbon atoms may be  
 25 additionally substituted by =O; and any available nitrogen atoms in the ring are  
 substituted by H,  $-C_{1-6}$ alkylOR $^h$ ,  $-C_{1-6}$ alkyl,  $-C_{1-6}$ alkylNR $^hR^h$ ,  
 $-C_{1-3}$ alkylC(=O)OR $^h$ ,  $-C_{1-3}$ alkylC(=O)NR $^hR^h$ ,  $-C_{1-3}$ alkylOC(=O)C $_{1-6}$ alkyl,  
 $-C_{1-3}$ alkylNR $^hC(=O)C_{1-6}$ alkyl,  $-C(=O)R^j$  or  $-C_{1-3}$ alkylR $^j$ ;

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$R^5$  is independently, at each instance, H, C<sub>1-5</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, -OC<sub>1-6</sub>alkyl, -OC<sub>1-4</sub>haloalkyl, -OC<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -OC<sub>2-6</sub>alkylOR<sup>h</sup>, -NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>1-4</sub>haloalkyl, -NR<sup>h</sup>C<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>2-6</sub>alkylOR<sup>h</sup>, naphthyl, -CO<sub>2</sub>(C<sub>1-6</sub>alkyl), -C(=O)(C<sub>1-6</sub>alkyl), -C(=O)NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C(=O)R<sup>h</sup>, 5 -NR<sup>h</sup>C(=O)NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>CO<sub>2</sub>(C<sub>1-6</sub>alkyl), -C<sub>1-8</sub>alkylOR<sup>h</sup>, -C<sub>1-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -S(=O)<sub>n</sub>(C<sub>1-6</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>S(=O)<sub>2</sub>(C<sub>1-6</sub>alkyl), -OC(=O)NR<sup>h</sup>R<sup>h</sup>, a phenyl ring substituted with 0, 1, 2, or 3 substituents independently selected from R<sup>10</sup>; or R<sup>5</sup> is a saturated or unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 atoms selected from O, N and S, substituted with 0, 1, 2, or 3 substituents independently selected from R<sup>10</sup>;

10  $R^6$  is independently, at each instance, H, C<sub>1-5</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, -OC<sub>1-6</sub>alkyl, -OC<sub>1-4</sub>haloalkyl, -OC<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -OC<sub>2-6</sub>alkylOR<sup>h</sup>, -NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>1-4</sub>haloalkyl, -NR<sup>h</sup>C<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup> or -NR<sup>h</sup>C<sub>2-6</sub>alkylOR<sup>h</sup>, -C<sub>1-8</sub>alkylOR<sup>h</sup>, -C<sub>1-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -S(C<sub>1-6</sub>alkyl), a phenyl ring substituted with 1, 2, or 3 substituents independently selected from R<sup>10</sup>; or R<sup>6</sup> is a saturated or unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 atoms selected from O, N and S substituted with 0, 1, 2, or 3 substituents independently selected from R<sup>10</sup>;

15  $R^7$  is independently, at each instance, H, C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, bromo, -OC<sub>1-6</sub>alkyl, -OC<sub>1-4</sub>haloalkyl, -OC<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -OC<sub>2-6</sub>alkylOR<sup>h</sup>, -NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>1-4</sub>haloalkyl, -NR<sup>h</sup>C<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>2-6</sub>alkylOR<sup>h</sup>, 20 -C<sub>1-8</sub>alkylOR<sup>h</sup>, -C<sub>1-6</sub>alkylNR<sup>h</sup>R<sup>h</sup> or -S(C<sub>1-6</sub>alkyl); or R<sup>7</sup> is a saturated or unsaturated 4- or 5-membered ring heterocycle containing a single nitrogen atom, wherein the ring is substituted with 0, 1 or 2 substituents independently selected from halo, C<sub>1-2</sub>haloalkyl and C<sub>1-3</sub>alkyl;

25  $R^8$  is independently, at each instance, H, C<sub>1-5</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, -OC<sub>1-6</sub>alkyl, -OC<sub>1-4</sub>haloalkyl, -OC<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -OC<sub>2-6</sub>alkylOR<sup>h</sup>, -NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>1-4</sub>haloalkyl, -NR<sup>h</sup>C<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>2-6</sub>alkylOR<sup>h</sup>, -C<sub>1-8</sub>alkylOR<sup>h</sup>, -C<sub>1-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -S(C<sub>1-6</sub>alkyl), a phenyl ring substituted with 1, 2, or 3 substituents independently selected from R<sup>10</sup>, or R<sup>8</sup> is a saturated or unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 atoms selected from O, N and S substituted with 0, 1, 2, or 3 substituents independently selected from R<sup>10</sup>;

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$R^9$  is independently, at each instance, H, C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, -OC<sub>1-6</sub>alkyl, -OC<sub>1-4</sub>haloalkyl, -OC<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -OC<sub>2-6</sub>alkylOR<sup>h</sup>, -NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>1-4</sub>haloalkyl, -NR<sup>h</sup>C<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup> or -NR<sup>h</sup>C<sub>2-6</sub>alkylOR<sup>h</sup>, -CO<sub>2</sub>(C<sub>1-6</sub>alkyl), -C(=O)(C<sub>1-6</sub>alkyl), -C(=O)NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C(=O)(C<sub>1-6</sub>alkyl), -NR<sup>h</sup>C(=O)NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>CO<sub>2</sub>(C<sub>1-6</sub>alkyl), -C<sub>1-8</sub>alkylOR<sup>h</sup>, -C<sub>1-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -S(=O)<sub>n</sub>(C<sub>1-6</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>S(=O)<sub>2</sub>(C<sub>1-6</sub>alkyl), -OC(=O)NR<sup>h</sup>R<sup>h</sup>, a phenyl ring substituted with 0, 1, 2, or 3 substituents independently selected from R<sup>10</sup>; or R<sup>9</sup> is a saturated or unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 atoms selected from O, N and S substituted with 0, 1, 2, or 3 substituents independently selected from R<sup>10</sup>; wherein at least one of R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup>, R<sup>8</sup> and R<sup>9</sup> is C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, -OC<sub>1-4</sub>haloalkyl, -OC<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -OC<sub>2-6</sub>alkylOR<sup>h</sup>, -NR<sup>h</sup>C<sub>1-4</sub>haloalkyl, -NR<sup>h</sup>C<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>2-6</sub>alkylOR<sup>h</sup>, -C<sub>1-8</sub>alkylOR<sup>h</sup>, -C<sub>1-6</sub>alkylNR<sup>h</sup>R<sup>h</sup> or -S(C<sub>1-6</sub>alkyl); or R<sup>9</sup> is a saturated or unsaturated 4- or 5-membered ring heterocycle containing a single nitrogen atom, wherein the ring is substituted with 0, 1 or 2 substituents independently selected from halo, C<sub>1-2</sub>haloalkyl and C<sub>1-3</sub>alkyl;

R<sup>10</sup> is independently, at each instance, selected from H, C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl), -C(=O)NR<sup>h</sup>R<sup>h</sup>, -C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>, -OR<sup>h</sup>, -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>h</sup>R<sup>h</sup>, -OC(=O)N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -OC<sub>2-6</sub>alkylOR<sup>h</sup>, -SR<sup>h</sup>, -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup> and -NR<sup>h</sup>C<sub>2-6</sub>alkylOR<sup>h</sup>; or R<sup>10</sup> is a saturated or unsaturated 5-, 6- or 7-membered monocyclic or 6-, 7-, 8-, 9-, 10- or 11-membered bicyclic ring containing 1 or 2 atoms selected from N, O and S that is optionally vicinally fused with a saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected from O, N and S with the remaining atoms being carbon, so long as the combination of O

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and S atoms is not greater than 2, wherein the carbon atoms of the ring are substituted by 0, 1 or 2 oxo groups, wherein the ring is substituted by 0, 1, 2 or 3 groups selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl), -C(=O)NR<sup>h</sup>R<sup>h</sup>, -C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>, -OR<sup>h</sup>, 5 -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>h</sup>R<sup>h</sup>, -OC(=O)N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -OC<sub>2-6</sub>alkylOR<sup>h</sup>, -SR<sup>h</sup>, -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl), 10 -N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup> and -NR<sup>h</sup>C<sub>2-6</sub>alkylOR<sup>h</sup>; or R<sup>10</sup> is C<sub>1-4</sub>alkyl substituted by 0, 1, 2 or 3 groups selected 15 from C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)NR<sup>h</sup>R<sup>h</sup>, -C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>, -OR<sup>h</sup>, -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>h</sup>R<sup>h</sup>, -OC(=O)N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -OC<sub>2-6</sub>alkylOR<sup>h</sup>, -SR<sup>h</sup>, 20 -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)NR<sup>h</sup>R<sup>h</sup>, -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup> and -NR<sup>h</sup>C<sub>2-6</sub>alkylOR<sup>h</sup>;

R<sup>11</sup> is independently, at each instance, selected from H, C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl), -C(=O)NR<sup>h</sup>R<sup>h</sup>, -C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>, -OR<sup>h</sup>, -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>h</sup>R<sup>h</sup>, 25 -OC(=O)N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -OC<sub>2-6</sub>alkylOR<sup>h</sup>, -SR<sup>h</sup>, -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)NR<sup>h</sup>R<sup>h</sup>, -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup> and 30 -NR<sup>h</sup>C<sub>2-6</sub>alkylOR<sup>h</sup>; or R<sup>11</sup> is a saturated or unsaturated 5-, 6- or 7-membered monocyclic or 6-, 7-, 8-, 9-, 10- or 11-membered bicyclic ring containing 1, 2 or 3 atoms selected from N, O and S, wherein the ring is fused with 0 or 1 benzo

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groups and 0 or 1 saturated or unsaturated 5-, 6- or 7-membered heterocyclic ring containing 1, 2 or 3 atoms selected from N, O and S; wherein the carbon atoms of the ring are substituted by 0, 1 or 2 oxo groups, wherein the ring is substituted by 0, 1, 2 or 3 groups selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro,

5   -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl), -C(=O)NR<sup>h</sup>R<sup>h</sup>, -C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>, -OR<sup>h</sup>,  
  -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>h</sup>R<sup>h</sup>, -OC(=O)N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl),  
  -OC<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -OC<sub>2-6</sub>alkylOR<sup>h</sup>, -SR<sup>h</sup>, -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl),  
  -S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl),  
  -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl),

10   -N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>,  
  -N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup> and  
  -NR<sup>h</sup>C<sub>2-6</sub>alkylOR<sup>h</sup>; or R<sup>11</sup> is C<sub>1-4</sub>alkyl substituted by 0, 1, 2 or 3 groups selected  
  from C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl),  
  -C(=O)NR<sup>h</sup>R<sup>h</sup>, -C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>, -OR<sup>h</sup>, -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>h</sup>R<sup>h</sup>,

15   -OC(=O)N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -OC<sub>2-6</sub>alkylOR<sup>h</sup>, -SR<sup>h</sup>,  
  -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>,  
  -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl),  
  -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl),  
  -N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>,

20   -N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup> and  
  -NR<sup>h</sup>C<sub>2-6</sub>alkylOR<sup>h</sup>;

R<sup>12</sup> is independently, at each instance, selected from H, C<sub>1-8</sub>alkyl,  
  C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)O(C<sub>1-8</sub>alkyl), -C(=O)NR<sup>h</sup>R<sup>h</sup>,  
  -C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>, -OR<sup>h</sup>, -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>h</sup>R<sup>h</sup>,

25   -OC(=O)N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -OC<sub>2-6</sub>alkylOR<sup>h</sup>, -SR<sup>h</sup>,  
  -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>,  
  -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl),  
  -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl),  
  -N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>,

30   -N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup> and  
  -NR<sup>h</sup>C<sub>2-6</sub>alkylOR<sup>h</sup>; or R<sup>12</sup> is a saturated or unsaturated 5-, 6- or 7-membered  
  monocyclic or 6-, 7-, 8-, 9-, 10- or 11-membered bicyclic ring containing 1, 2 or 3

atoms selected from N, O and S, wherein the ring is fused with 0 or 1 benzo groups and 0 or 1 saturated or unsaturated 5-, 6- or 7-membered heterocyclic ring containing 1, 2 or 3 atoms selected from N, O and S; wherein the carbon atoms of the ring are substituted by 0, 1 or 2 oxo groups, wherein the ring is substituted by

5    0, 1, 2 or 3 groups selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl), -C(=O)NR<sup>h</sup>R<sup>h</sup>, -C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>, -OR<sup>h</sup>, -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>h</sup>R<sup>h</sup>, -OC(=O)N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -OC<sub>2-6</sub>alkylOR<sup>h</sup>, -SR<sup>h</sup>, -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl),

10    -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup> and -NR<sup>h</sup>C<sub>2-6</sub>alkylOR<sup>h</sup>; or R<sup>12</sup> is C<sub>1-4</sub>alkyl substituted by 0, 1, 2 or 3 groups selected from C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl),

15    -C(=O)NR<sup>h</sup>R<sup>h</sup>, -C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>, -OR<sup>h</sup>, -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>h</sup>R<sup>h</sup>, -OC(=O)N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -OC<sub>2-6</sub>alkylOR<sup>h</sup>, -SR<sup>h</sup>, -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl),

20    -N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup> and -NR<sup>h</sup>C<sub>2-6</sub>alkylOR<sup>h</sup>;

R<sup>13</sup> is independently, at each instance, selected from H, C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl), -C(=O)NR<sup>h</sup>R<sup>h</sup>, -C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>, -OR<sup>h</sup>, -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>h</sup>R<sup>h</sup>, -OC(=O)N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -OC<sub>2-6</sub>alkylOR<sup>h</sup>, -SR<sup>h</sup>, -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl),

25    -N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup> and -NR<sup>h</sup>C<sub>2-6</sub>alkylOR<sup>h</sup>; or R<sup>13</sup> is a saturated or unsaturated 5-, 6- or 7-membered

monocyclic or 6-, 7-, 8-, 9-, 10- or 11-membered bicyclic ring containing 1, 2 or 3 atoms selected from N, O and S, wherein the ring is fused with 0 or 1 benzo groups and 0 or 1 saturated or unsaturated 5-, 6- or 7-membered heterocyclic ring containing 1, 2 or 3 atoms selected from N, O and S; wherein the carbon atoms of the ring are substituted by 0, 1 or 2 oxo groups, wherein the ring is substituted by 0, 1, 2 or 3 groups selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl), -C(=O)NR<sup>h</sup>R<sup>h</sup>, -C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>, -OR<sup>h</sup>, -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>h</sup>R<sup>h</sup>, -OC(=O)N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -OC<sub>2-6</sub>alkylOR<sup>h</sup>, -SR<sup>h</sup>, -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl),

5 -S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup> and -NR<sup>h</sup>C<sub>2-6</sub>alkylOR<sup>h</sup>; or R<sup>13</sup> is C<sub>1-4</sub>alkyl substituted by 0, 1, 2 or 3 groups selected

10 from C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl), -C(=O)NR<sup>h</sup>R<sup>h</sup>, -C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>, -OR<sup>h</sup>, -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>h</sup>R<sup>h</sup>,

15 -OC(=O)N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -OC<sub>2-6</sub>alkylOR<sup>h</sup>, -SR<sup>h</sup>, -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup> and -NR<sup>h</sup>C<sub>2-6</sub>alkylOR<sup>h</sup>;

20 R<sup>14</sup> is independently, at each instance, selected from H, C<sub>1-8</sub>alkyl,

25 C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl), -C(=O)NR<sup>h</sup>R<sup>h</sup>, -C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>, -OR<sup>h</sup>, -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>h</sup>R<sup>h</sup>,

30 -OC(=O)N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -OC<sub>2-6</sub>alkylOR<sup>h</sup>, -SR<sup>h</sup>, -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup> and -NR<sup>h</sup>C<sub>2-6</sub>alkylOR<sup>h</sup>

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-NR<sup>h</sup>C<sub>2-6</sub>alkylOR<sup>h</sup>; or R<sup>14</sup> is a saturated or unsaturated 5-, 6- or 7-membered monocyclic or 6-, 7-, 8-, 9-, 10- or 11-membered bicyclic ring containing 1 or 2 atoms selected from N, O and S that is optionally vicinally fused with a saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected from O,

5 N and S with the remaining atoms being carbon, so long as the combination of O and S atoms is not greater than 2, wherein the carbon atoms of the ring are substituted by 0, 1 or 2 oxo groups, wherein the ring is substituted by 0, 1, 2 or 3 groups selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl), -C(=O)NR<sup>h</sup>R<sup>h</sup>, -C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>, -OR<sup>h</sup>,

10 -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>h</sup>R<sup>h</sup>, -OC(=O)N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -OC<sub>2-6</sub>alkylOR<sup>h</sup>, -SR<sup>h</sup>, -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>,

15 -N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup> and -NR<sup>h</sup>C<sub>2-6</sub>alkylOR<sup>h</sup>; or R<sup>14</sup> is C<sub>1-4</sub>alkyl substituted by 0, 1, 2 or 3 groups selected from C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)NR<sup>h</sup>R<sup>h</sup>, -C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>, -OR<sup>h</sup>, -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>h</sup>R<sup>h</sup>, -OC(=O)N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -OC<sub>2-6</sub>alkylOR<sup>h</sup>, -SR<sup>h</sup>, -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>,

20 -N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup> and -NR<sup>h</sup>C<sub>2-6</sub>alkylOR<sup>h</sup>;

25 -NR<sup>h</sup>C<sub>2-6</sub>alkylOR<sup>h</sup>;

R<sup>h</sup> is independently, at each instance, H, phenyl, benzyl or C<sub>1-6</sub>alkyl, the phenyl, benzyl and C<sub>1-6</sub>alkyl being substituted by 0, 1, 2 or 3 substituents selected from halo, C<sub>1-4</sub>alkyl, C<sub>1-3</sub>haloalkyl, -OC<sub>1-4</sub>alkyl, -NH<sub>2</sub>, -NHC<sub>1-4</sub>alkyl, -N(C<sub>1-4</sub>alkyl)C<sub>1-4</sub>alkyl;

30 R<sup>i</sup> is a heterocycle selected from the group of thiophene, pyrrole, 1,3-oxazole, 1,3-thiazol-5-yl, 1,3,4-oxadiazole, 1,3,4-thiadiazole, 1,2,3-oxadiazole, 1,2,3-thiadiazole, 1H-1,2,3-triazole, isothiazole, 1,2,4-oxadiazole, 1,2,4-

thiadiazole, 1,2,3,4-oxatriazole, 1,2,3,4-thiatriazole, 1H-1,2,3,4-tetraazole,  
1,2,3,5-oxatriazole, 1,2,3,5-thiatriazole, furan, imidazol-1-yl, imidazol-3-yl,  
imidazol-4-yl, 1,2,4-triazole, 1,2,4-triazole, isoxazole, pyrazol-3-yl, pyrazol-4-yl,  
pyrazol-5-yl, thiolane, pyrrolidine, tetrahydrofuran, 4,5-dihydrothiophene, 2-  
5 pyrrolidine, 4,5-dihydrofuran, pyridazine, pyrimidine, pyrazine, 1,2,3-triazine,  
1,2,4-triazine, 1,2,4-triazine, 1,3,5-triazine, pyridine, 2H-3,4,5,6-tetrahydropyran,  
thiane, 1,2-diazaperhydroine, 1,3-diazaperhydroine, piperazine, 1,3-  
oxazaperhydroine, morpholine, 1,3-thiazaperhydroine, 1,4-thiazaperhydroine,  
piperidine, 2H-3,4-dihydropyran, 2,3-dihydro-4H-thiin, 1,4,5,6-  
10 tetrahydropyridine, 2H-5,6-dihydropyran, 2,3-dihydro-6H-thiin, 1,2,5,6-  
tetrahydropyridine, 3,4,5,6-tetrahydropyridine, 4H-pyran, 4H-thiin, 1,4-  
dihydropyridine, 1,4-dithiane, 1,4-dioxane, 1,4-oxathiane, 1,2-oxazolidine, 1,2-  
thiazolidine, pyrazolidine, 1,3-oxazolidine, 1,3-thiazolidine, imidazolidine, 1,2,4-  
oxadiazolidine, 1,3,4-oxadiazolidine, 1,2,4-thiadiazolidine, 1,3,4-thiadiazolidine,  
15 1,2,4-triazolidine, 2-imidazolin-1-yl, 2-imidazolin-2-yl, 2-imidazolin-5-yl, 3-  
imidazoline, 2-pyrazoline, 4-imidazoline, 2,3-dihydroisothiazole, 4,5-  
dihydroisoxazole, 4,5-dihydroisothiazole, 2,5-dihydroisoxazole, 2,5-  
dihydroisothiazole, 2,3-dihydroisoxazole, 4,5-dihydrooxazole, 2,3-  
dihydrooxazole, 2,5-dihydrooxazole, 4,5-dihydrothiazole, 2,3-dihydrothiazole,,  
20 2,5-dihydrothiazole, 1,3,4-oxathiazolidine, 1,4,2-oxathiazolidine, 2,3-dihydro-1H-[1,2,3]triazole, 2,5-dihydro-1H-[1,2,3]triazole, 4,5-dihydro-1H-[1,2,3]triazol-1-yl,  
4,5-dihydro-1H-[1,2,3]triazol-3-yl, 4,5-dihydro-1H-[1,2,3]triazol-5-yl, 2,3-  
dihydro-1H-[1,2,4]triazole, 4,5-dihydro-1H-[1,2,4]triazole, 2,3-dihydro-  
[1,2,4]oxadiazole, 2,5-dihydro-[1,2,4]oxadiazole, 4,5-dihydro-[1,2,4]thiadiazole,  
25 2,3-dihydro-[1,2,4] thidiazole, 2,5-dihydro-[1,2,4] thiadiazole, 4,5-dihydro-[1,2,4]  
thiadiazole, 2,5-dihydro-[1,2,4]oxadiazole, 2,3-dihydro-[1,2,4]oxadiazole, 4,5-  
dihydro-[1,2,4]oxadiazole, 2,5-dihydro-[1,2,4]thiadiazole, 2,3-dihydro-[1,2,4]  
thiadiazole, 4,5-dihydro-[1,2,4] thiadiazole, 2,3-dihydro-[1,3,4]oxadiazole, 2,3-  
dihydro-[1,3,4]thiadiazole, [1,4,2]oxathiazole, [1,3,4]oxathiazole, 1,3,5-  
30 triazaperhydroine, 1,2,4-triazaperhydroine, 1,4,2-dithiazaperhydroine, 1,4,2-  
dioxazaperhydroine, 1,3,5-oxadiazaperhydroine, 1,2,5-oxadiazaperhydroine,  
1,3,4-thiadiazaperhydroine, 1,3,5-thiadiazaperhydroine, 1,2,5-

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thiadiazaperhydroine, 1,3,4-oxadiazaperhydroine, 1,4,3-oxathiazaperhydroine,  
1,4,2-oxathiazaperhydroine, 1,4,5,6-tetrahydropyridazine, 1,2,3,4-  
tetrahydropyridazine, 1,2,3,6-tetrahydropyridazine, 1,2,5,6-tetrahydropyrimidine,  
1,2,3,4-tetrahydropyrimidine, 1,4,5,6-tetrahydropyrimidine, 1,2,3,6-  
5 tetrahydropyrazine, 1,2,3,4-tetrahydropyrazine, 5,6-dihydro-4H-[1,2]oxazine, 5,6-  
dihydro-2H-[1,2]oxazine, 3,6-dihydro-2H-[1,2]oxazine, 3,4-dihydro-2H-  
[1,2]oxazine, 5,6-dihydro-4H-[1,2]thiazine, 5,6-dihydro-2H-[1,2] thiazine, 3,6-  
dihydro-2H-[1,2] thiazine, 3,4-dihydro-2H-[1,2] thiazine, 5,6-dihydro-2H-  
[1,3]oxazine, 5,6-dihydro-4H-[1,3]oxazine, 3,6-dihydro-2H-[1,3]oxazine, 3,4-  
10 dihydro-2H-[1,3]oxazine, 3,6-dihydro-2H-[1,4]oxazine, 3,4-dihydro-2H-  
[1,4]oxazine, 5,6-dihydro-2H-[1,3]thiazine, 5,6-dihydro-4H-[1,3]thiazine, 3,6-  
dihydro-2H-[1,3]thiazine, 3,4-dihydro-2H-[1,3]thiazine, 3,6-dihydro-2H-  
[1,4]thiazine, 3,4-dihydro-2H-[1,4]thiazine, 1,2,3,6-tetrahydro-[1,2,4]triazine,  
1,2,3,4-tetrahydro-[1,2,4]triazine, 1,2,3,4-tetrahydro-[1,3,5]triazine, 2,3,4,5-  
15 tetrahydro-[1,2,4]triazine, 1,4,5,6-tetrahydro-[1,2,4]triazine, 5,6-dihydro-  
[1,4,2]dioxazine, 5,6-dihydro-[1,4,2]dioxazine, 5,6-dihydro-[1,4,2]dithiazine, 2,3-  
dihydro-[1,4,2]dioxazine, 3,4-dihydro-2H-[1,3,4]oxadiazine, 3,6-dihydro-2H-  
[1,3,4]oxadiazine, 3,4-dihydro-2H-[1,3,5]oxadiazine, 3,6-dihydro-2H-  
[1,3,5]oxadiazine, 5,6-dihydro-2H-[1,2,5]oxadiazine, 5,6-dihydro-4H-  
20 [1,2,5]oxadiazine, 3,4-dihydro-2H-[1,3,4]thiadiazine, 3,6-dihydro-2H-  
[1,3,4]thiadiazine, 3,4-dihydro-2H-[1,3,5]thiadiazine, 3,6-dihydro-2H-  
[1,3,5]thiadiazine, 5,6-dihydro-2H-[1,2,5]thiadiazine, 5,6-dihydro-4H-  
[1,2,5]thiadiazine, 5,6-dihydro-2H-[1,2,3]oxadiazine, 3,6-dihydro-2H-  
[1,2,5]oxadiazine, 5,6-dihydro-4H-[1,3,4]oxadiazine, 3,4-dihydro-2H-  
25 [1,2,5]oxadiazine, 5,6-dihydro-2H-[1,2,3]thiadiazine, 3,6-dihydro-2H-  
[1,2,5]thiadiazine, 5,6-dihydro-4H-[1,3,4]thiadiazine, 3,4-dihydro-2H-  
[1,2,5]thiadiazine, 5,6-dihydro-[1,4,3]oxathiazine, 5,6-dihydro-[1,4,2]oxathiazine,  
2,3-dihydro-[1,4,3]oxathiazine, 2,3-dihydro-[1,4,2]oxathiazine, 4,5-  
dihydropyridine, 1,6-dihydropyridine, 5,6-dihydropyridine, 2H-pyran, 2H-thiin,  
30 3,6-dihydropyridine, 2,3-dihydropyridazine, 2,5-dihydropyridazine, 4,5-  
dihydropyridazine, 1,2-dihydropyridazine, 1,4-dihydropyrimidin-1-yl, 1,4-  
dihydropyrimidin-4-yl, 1,4-dihydropyrimidin-5-yl, 1,4-dihydropyrimidin-6-yl,

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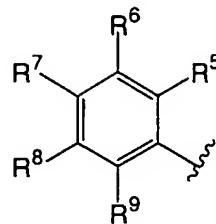
2,3-dihydropyrimidine, 2,5-dihydropyrimidine, 5,6-dihydropyrimidine, 3,6-dihydropyrimidine, 4,5-dihydropyrazine, 5,6-dihydropyrazine, 3,6-dihydropyrazine, 4,5-dihydropyrazine, 1,4-dihydropyrazine, 1,4-dithiin, 1,4-dioxin, 2H-1,2-oxazine, 6H-1,2-oxazine, 4H-1,2-oxazine, 2H-1,3-oxazine, 4H-1,3-oxazine, 6H-1,3-oxazine, 2H-1,4-oxazine, 4H-1,4-oxazine, 2H-1,3-thiazine, 2H-1,4-thiazine, 4H-1,2-thiazine, 6H-1,3-thiazine, 4H-1,4-thiazine, 2H-1,2-thiazine, 6H-1,2-thiazine, 1,4-oxathiin, 2H,5H-1,2,3-triazine, 1H,4H-1,2,3-triazine, 4,5-dihydro-1,2,3-triazine, 1H,6H-1,2,3-triazine, 1,2-dihydro-1,2,3-triazine, 2,3-dihydro-1,2,4-triazine, 3H,6H-1,2,4-triazine, 1H,6H-1,2,4-triazine, 3,4-dihydro-1,2,4-triazine, 1H,4H-1,2,4-triazine, 5,6-dihydro-1,2,4-triazine, 4,5-dihydro-1,2,4-triazine, 2H,5H-1,2,4-triazine, 1,2-dihydro-1,2,4-triazine, 1H,4H-1,3,5-triazine, 1,2-dihydro-1,3,5-triazine, 1,4,2-dithiazine, 1,4,2-dioxazine, 2H-1,3,4-oxadiazine, 2H-1,3,5-oxadiazine, 6H-1,2,5-oxadiazine, 4H-1,3,4-oxadiazine, 4H-1,3,5-oxadiazine, 4H-1,2,5-oxadiazine, 2H-1,3,5-thiadiazine, 6H-1,2,5-thiadiazine, 4H-1,3,4-thiadiazine, 4H-1,3,5-thiadiazine, 4H-1,2,5-thiadiazine, 2H-1,3,4-thiadiazine, 6H-1,3,4-thiadiazine, 6H-1,3,4-oxadiazine, and 1,4,2-oxathiazine, wherein the heterocycle is optionally vicinally fused with a saturated or unsaturated 5-, 6- or 7-membered ring containing 0, 1 or 2 atoms independently selected from N, O and S;

R<sup>j</sup> is phenyl substituted by 0, 1 or 2 groups selected from halo, C<sub>1-4</sub>alkyl, C<sub>1-3</sub>haloalkyl, -OR<sup>h</sup> and -NR<sup>h</sup>R<sup>h</sup>; or R<sup>j</sup> is a saturated or unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 heteroatoms independently selected from N, O and S, wherein no more than 2 of the ring members are O or S, wherein the heterocycle is optionally fused with a phenyl ring, and the carbon atoms of the heterocycle are substituted by 0, 1 or 2 oxo groups, wherein the heterocycle or fused phenyl ring is substituted by 0, 1, 2 or 3 substituents selected from halo, C<sub>1-4</sub>alkyl, C<sub>1-3</sub>haloalkyl, -OR<sup>h</sup> and -NR<sup>h</sup>R<sup>h</sup>; and

R<sup>k</sup> is hydrogen or -CH<sub>3</sub>.

30        57. The compound according to Claim 56, wherein R<sup>l</sup> is

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58. The compound according to Claim 56, wherein R<sup>7</sup> is C<sub>2-6</sub>alkyl or C<sub>1-4</sub>haloalkyl.

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59. The compound according to Claim 56, wherein R<sup>1</sup> is a naphthyl substituted by 0, 1, 2 or 3 substituents independently selected from R<sup>5</sup>.

60. The compound according to Claim 56, wherein R<sup>1</sup> is R<sup>i</sup> substituted  
10 by 1, 2 or 3 substituents independently selected from R<sup>5</sup>.

61. The compound according to Claim 60, wherein R<sup>i</sup> is substituted by one substituent selected from halo, C<sub>1-4</sub>haloalkyl and C<sub>1-5</sub>alkyl, and additionally by 0, 1 or 2 substituents independently selected from R<sup>5</sup>.

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62. The compound according to Claim 56, wherein R<sup>15</sup> is H.

63. The compound according to Claim 56, wherein R<sup>15</sup> is R<sup>10</sup>, C<sub>1-8</sub>alkyl substituted by 0, 1 or 2 substituents selected from R<sup>10</sup>, or a saturated or  
20 unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 heteroatoms independently selected from N, O and S that is optionally vicinally fused with a saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected from O, N and S with the remaining atoms being carbon, so long as the combination of O and S atoms is not greater than 2, the heterocycle and bridge  
25 being substituted by 0, 1, 2 or 3 substituents independently selected from R<sup>10</sup>, or R<sup>15</sup> is -(CH<sub>2</sub>)<sub>n</sub>phenyl substituted by 0, 1, 2 or 3 substituents independently selected from H, C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl), -C(=O)NR<sup>h</sup>R<sup>h</sup>, -C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>, -OC(=O)(C<sub>1-8</sub>alkyl),

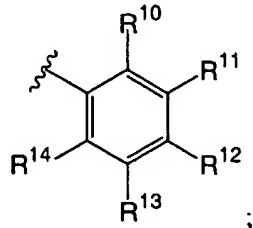
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- OC(=O)NR<sup>h</sup>R<sup>h</sup>, -OC(=O)N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>,
- OC<sub>2-6</sub>alkylOR<sup>h</sup>, -SR<sup>h</sup>, -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>,
- S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl),
- S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl),
- 5 -N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>,
- N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>,
- NR<sup>h</sup>C<sub>2-6</sub>alkylOR<sup>h</sup>, and C<sub>1-4</sub>alkyl substituted by 0, 1, 2 or 3 groups selected from
- C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl),
- C(=O)NR<sup>h</sup>R<sup>h</sup>, -C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>, -OR<sup>h</sup>, -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>h</sup>R<sup>h</sup>,
- 10 -OC(=O)N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -OC<sub>2-6</sub>alkylOR<sup>h</sup>, -SR<sup>h</sup>,
- S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>,
- S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl),
- S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl),
- N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>,
- 15 -N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup> and
- NR<sup>h</sup>C<sub>2-6</sub>alkylOR<sup>h</sup>.

64. The compound according to Claim 56, wherein R<sup>16</sup> is H.

20 65. The compound according to Claim 56, wherein R<sup>16</sup> is halo,  
-NHC<sub>1-3</sub>alkyl, -N(C<sub>1-3</sub>alkyl)C<sub>1-3</sub>alkyl, -OC<sub>1-3</sub>alkyl, -C<sub>1-2</sub>haloalkyl, -OC<sub>1-2</sub>haloalkyl  
or C<sub>1-3</sub>alkyl.

66. The compound according to Claim 56, wherein R<sup>4</sup> is



25 wherein at least one of R<sup>10</sup>, R<sup>11</sup>, R<sup>12</sup>, R<sup>13</sup> and R<sup>14</sup> is other than C<sub>1-4</sub>haloalkyl or  
halo.

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67. The compound according to Claim 66, wherein at least one of R<sup>10</sup>, R<sup>11</sup>, R<sup>12</sup>, R<sup>13</sup> and R<sup>14</sup> is -OR<sup>h</sup> or -NR<sup>h</sup>R<sup>h</sup>.

68. The compound according to Claim 56, wherein R<sup>4</sup> is a saturated or  
 5 unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 atoms selected  
 from O, N and S, so long as the combination of O and S atoms is not greater than  
 2, wherein each of the carbon atoms of the heterocycle is substituted by H,  
 C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, oxo, -OR<sup>h</sup>, -S(=O)<sub>n</sub>C<sub>1-6</sub>alkyl,  
 -OC<sub>1-4</sub>haloalkyl, -OC<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -OC<sub>2-6</sub>alkylOR<sup>h</sup>, -OC<sub>1-6</sub>alkylC(=O)OR<sup>h</sup>,  
 10 -NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>1-4</sub>haloalkyl, -NR<sup>h</sup>C<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>2-6</sub>alkylOR<sup>h</sup>,  
 -C(=O)C<sub>1-6</sub>alkyl, -C(=O)OC<sub>1-6</sub>alkyl, -OC(=O)C<sub>1-6</sub>alkyl, -C(=O)NR<sup>h</sup>C<sub>1-6</sub>alkyl or  
 -NR<sup>h</sup>C(=O)C<sub>1-6</sub>alkyl; and saturated carbon atoms may be additionally substituted  
 by =O; and any available nitrogen atoms in the heterocycle are substituted by H,  
 -C<sub>1-6</sub>alkylOR<sup>h</sup>, -C<sub>1-6</sub>alkyl, -C<sub>1-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -C<sub>1-3</sub>alkylC(=O)OR<sup>h</sup>,  
 15 -C<sub>1-3</sub>alkylC(=O)NR<sup>h</sup>R<sup>h</sup>, -C<sub>1-3</sub>alkylOC(=O)C<sub>1-6</sub>alkyl, -C<sub>1-3</sub>alkylNR<sup>h</sup>C(=O)C<sub>1-6</sub>alkyl,  
 -C(=O)R<sup>j</sup> or -C<sub>1-3</sub>alkylR<sup>j</sup>.

69. The compound according to Claim 56, wherein R<sup>4</sup> is a saturated or  
 unsaturated 5- or 6-membered ring heterocycle containing 1 or 2 atoms selected  
 20 from O, N and S, wherein each of the carbon atoms of the heterocycle is  
 substituted by H, C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, oxo, -OR<sup>h</sup>,  
 -S(=O)<sub>n</sub>C<sub>1-6</sub>alkyl, -OC<sub>1-4</sub>haloalkyl, -OC<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -OC<sub>2-6</sub>alkylOR<sup>h</sup>,  
 -OC<sub>1-6</sub>alkylC(=O)OR<sup>h</sup>, -NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>1-4</sub>haloalkyl, -NR<sup>h</sup>C<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>,  
 -NR<sup>h</sup>C<sub>2-6</sub>alkylOR<sup>h</sup>, -C(=O)C<sub>1-6</sub>alkyl, -C(=O)OC<sub>1-6</sub>alkyl, -OC(=O)C<sub>1-6</sub>alkyl,  
 25 -C(=O)NR<sup>h</sup>C<sub>1-6</sub>alkyl or -NR<sup>h</sup>C(=O)C<sub>1-6</sub>alkyl; and saturated carbon atoms may be  
 additionally substituted by =O; and any available nitrogen atoms in the bridge are  
 substituted by H, -C<sub>1-6</sub>alkylOR<sup>h</sup>, -C<sub>1-6</sub>alkyl, -C<sub>1-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>,  
 -C<sub>1-3</sub>alkylC(=O)OR<sup>h</sup>, -C<sub>1-3</sub>alkylC(=O)NR<sup>h</sup>R<sup>h</sup>, -C<sub>1-3</sub>alkylOC(=O)C<sub>1-6</sub>alkyl,  
 -C<sub>1-3</sub>alkylNR<sup>h</sup>C(=O)C<sub>1-6</sub>alkyl, -C(=O)R<sup>j</sup> or -C<sub>1-3</sub>alkylR<sup>j</sup>.

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70. The compound according to Claim 56, wherein R<sup>4</sup> is an 8-, 9-, 10-  
 or 11-membered bicyclic ring, containing 1, 2, 3 or 4 N atoms and 0, 1 or 2 atoms

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selected from S and O with the remainder being carbon atoms, wherein each of the carbon atoms of the ring is substituted by H, C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, oxo, -OR<sup>h</sup>, -S(=O)<sub>n</sub>C<sub>1-6</sub>alkyl, -OC<sub>1-4</sub>haloalkyl, -OC<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -OC<sub>2-6</sub>alkylOR<sup>h</sup>, -OC<sub>1-6</sub>alkylC(=O)OR<sup>h</sup>, -NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>1-4</sub>haloalkyl, 5 -NR<sup>h</sup>C<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>2-6</sub>alkylOR<sup>h</sup>, -C(=O)C<sub>1-6</sub>alkyl, -C(=O)OC<sub>1-6</sub>alkyl, -OC(=O)C<sub>1-6</sub>alkyl, -C(=O)NR<sup>h</sup>C<sub>1-6</sub>alkyl or -NR<sup>h</sup>C(=O)C<sub>1-6</sub>alkyl; and saturated carbon atoms may be additionally substituted by =O; and any available nitrogen atoms in the ring are substituted by H, -C<sub>1-6</sub>alkylOR<sup>h</sup>, -C<sub>1-6</sub>alkyl, -C<sub>1-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -C<sub>1-3</sub>alkylC(=O)OR<sup>h</sup>, -C<sub>1-3</sub>alkylC(=O)NR<sup>h</sup>R<sup>h</sup>, -C<sub>1-3</sub>alkylOC(=O)C<sub>1-6</sub>alkyl, 10 -C<sub>1-3</sub>alkylNR<sup>h</sup>C(=O)C<sub>1-6</sub>alkyl, -C(=O)R<sup>j</sup> or -C<sub>1-3</sub>alkylR<sup>j</sup>.

71. The compound according to Claim 56, wherein R<sup>4</sup> is an 8-, 9-, 10- or 11-membered bicyclic ring, containing 0, 1, 2, 3 or 4 N atoms and 0, 1 or 2 atoms selected from S and O with the remainder being carbon atoms, wherein at least one of the carbon atoms of the ring is substituted by C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, oxo, -OR<sup>h</sup>, -S(=O)<sub>n</sub>C<sub>1-6</sub>alkyl, -OC<sub>1-4</sub>haloalkyl, -OC<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -OC<sub>2-6</sub>alkylOR<sup>h</sup>, -OC<sub>1-6</sub>alkylC(=O)OR<sup>h</sup>, -NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>1-4</sub>haloalkyl, -NR<sup>h</sup>C<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>2-6</sub>alkylOR<sup>h</sup>, -C(=O)C<sub>1-6</sub>alkyl, -C(=O)OC<sub>1-6</sub>alkyl, -OC(=O)C<sub>1-6</sub>alkyl, -C(=O)NR<sup>h</sup>C<sub>1-6</sub>alkyl or -NR<sup>h</sup>C(=O)C<sub>1-6</sub>alkyl.

20 72. The compound according to Claim 56, wherein R<sup>5</sup> and R<sup>9</sup> are each independently selected from H, C<sub>1-4</sub>haloalkyl, halo, nitro, -OC<sub>1-6</sub>alkyl, -OC<sub>1-4</sub>haloalkyl, -OC<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -OC<sub>2-6</sub>alkylOR<sup>h</sup>, -NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>1-4</sub>haloalkyl, -NR<sup>h</sup>C<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>2-6</sub>alkylOR<sup>h</sup>, -CO<sub>2</sub>(C<sub>1-6</sub>alkyl), -C(=O)(C<sub>1-6</sub>alkyl), 25 -C(=O)NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C(=O)R<sup>h</sup>, -NR<sup>h</sup>C(=O)NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>CO<sub>2</sub>(C<sub>1-6</sub>alkyl), -C<sub>1-8</sub>alkylOR<sup>h</sup>, -C<sub>1-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -S(=O)<sub>n</sub>(C<sub>1-6</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>S(=O)<sub>2</sub>(C<sub>1-6</sub>alkyl) and -OC(=O)NR<sup>h</sup>R<sup>h</sup>.

30 73. The compound according to Claim 56, wherein R<sup>6</sup> and R<sup>8</sup> are each independently selected from H, C<sub>1-5</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, -OC<sub>1-6</sub>alkyl, -OC<sub>1-4</sub>haloalkyl, -OC<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -OC<sub>2-6</sub>alkylOR<sup>h</sup>, -NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>1-4</sub>haloalkyl,

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$-\text{NR}^h\text{C}_{2-6}\text{alkylNR}^h\text{R}^h$  or  $-\text{NR}^h\text{C}_{2-6}\text{alkylOR}^h$ ,  $-\text{C}_{1-8}\text{alkylOR}^h$ ,  $-\text{C}_{1-6}\text{alkylNR}^h\text{R}^h$  and  
 $-\text{S}(\text{C}_{1-6}\text{alkyl})$ .

74. The compound according to Claim 56, wherein  $\text{R}^7$  is  
5 independently, at each instance,  $\text{C}_{1-8}\text{alkyl}$ ,  $\text{C}_{1-4}\text{haloalkyl}$ ,  $-\text{OC}_{1-4}\text{haloalkyl}$ ,  
 $-\text{OC}_{2-6}\text{alkylNR}^h\text{R}^h$ ,  $-\text{OC}_{2-6}\text{alkylOR}^h$ ,  $-\text{NR}^h\text{R}^h$ ,  $-\text{NR}^h\text{C}_{1-4}\text{haloalkyl}$ ,  
 $-\text{NR}^h\text{C}_{2-6}\text{alkylNR}^h\text{R}^h$ ,  $-\text{NR}^h\text{C}_{2-6}\text{alkylOR}^h$ ,  $-\text{C}_{1-8}\text{alkylOR}^h$ ,  $-\text{C}_{1-6}\text{alkylNR}^h\text{R}^h$   
or  $-\text{S}(\text{C}_{1-6}\text{alkyl})$ .

10 75. The compound according to Claim 56, wherein  $\text{R}^{10}$  and  $\text{R}^{14}$  are  
each independently selected from H,  $\text{C}_{1-8}\text{alkyl}$ ,  $\text{C}_{1-4}\text{haloalkyl}$ , halo, cyano, nitro,  
 $-\text{C}(=\text{O})(\text{C}_{1-8}\text{alkyl})$ ,  $-\text{C}(=\text{O})\text{O}(\text{C}_{1-8}\text{alkyl})$ ,  $-\text{C}(=\text{O})\text{NR}^h\text{R}^h$ ,  $-\text{C}(=\text{NR}^h)\text{NR}^h\text{R}^h$ ,  $-\text{OR}^h$ ,  
 $-\text{OC}(=\text{O})(\text{C}_{1-8}\text{alkyl})$ ,  $-\text{OC}(=\text{O})\text{NR}^h\text{R}^h$ ,  $-\text{OC}(=\text{O})\text{N}(\text{R}^h)\text{S}(=\text{O})_2(\text{C}_{1-8}\text{alkyl})$ ,  
 $-\text{OC}_{2-6}\text{alkylNR}^h\text{R}^h$ ,  $-\text{OC}_{2-6}\text{alkylOR}^h$ ,  $-\text{SR}^h$ ,  $-\text{S}(=\text{O})(\text{C}_{1-8}\text{alkyl})$ ,  $-\text{S}(=\text{O})_2(\text{C}_{1-8}\text{alkyl})$ ,  
15  $-\text{S}(=\text{O})_2\text{NR}^h\text{R}^h$ ,  $-\text{S}(=\text{O})_2\text{N}(\text{R}^h)\text{C}(=\text{O})(\text{C}_{1-8}\text{alkyl})$ ,  $-\text{S}(=\text{O})_2\text{N}(\text{R}^h)\text{C}(=\text{O})\text{O}(\text{C}_{1-8}\text{alkyl})$ ,  
 $-\text{S}(=\text{O})_2\text{N}(\text{R}^h)\text{C}(=\text{O})\text{NR}^h\text{R}^h$ ,  $-\text{NR}^h\text{R}^h$ ,  $-\text{N}(\text{R}^h)\text{C}(=\text{O})(\text{C}_{1-8}\text{alkyl})$ ,  
 $-\text{N}(\text{R}^h)\text{C}(=\text{O})\text{O}(\text{C}_{1-8}\text{alkyl})$ ,  $-\text{N}(\text{R}^h)\text{C}(=\text{O})\text{NR}^h\text{R}^h$ ,  $-\text{N}(\text{R}^h)\text{C}(=\text{NR}^h)\text{NR}^h\text{R}^h$ ,  
 $-\text{N}(\text{R}^h)\text{S}(=\text{O})_2(\text{C}_{1-8}\text{alkyl})$ ,  $-\text{N}(\text{R}^h)\text{S}(=\text{O})_2\text{NR}^h\text{R}^h$ ,  $-\text{NR}^h\text{C}_{2-6}\text{alkylNR}^h\text{R}^h$  and  
 $-\text{NR}^h\text{C}_{2-6}\text{alkylOR}^h$  and  $\text{C}_{1-4}\text{alkyl}$  substituted by 0, 1, 2 or 3 groups selected from  
20  $\text{C}_{1-4}\text{haloalkyl}$ , halo, cyano, nitro,  $-\text{C}(=\text{O})(\text{C}_{1-8}\text{alkyl})$ ,  $-\text{C}(=\text{O})\text{NR}^h\text{R}^h$ ,  
 $-\text{C}(=\text{NR}^h)\text{NR}^h\text{R}^h$ ,  $-\text{OR}^h$ ,  $-\text{OC}(=\text{O})(\text{C}_{1-8}\text{alkyl})$ ,  $-\text{OC}(=\text{O})\text{NR}^h\text{R}^h$ ,  
 $-\text{OC}(=\text{O})\text{N}(\text{R}^h)\text{S}(=\text{O})_2(\text{C}_{1-8}\text{alkyl})$ ,  $-\text{OC}_{2-6}\text{alkylNR}^h\text{R}^h$ ,  $-\text{OC}_{2-6}\text{alkylOR}^h$ ,  $-\text{SR}^h$ ,  
 $-\text{S}(=\text{O})(\text{C}_{1-8}\text{alkyl})$ ,  $-\text{S}(=\text{O})_2(\text{C}_{1-8}\text{alkyl})$ ,  $-\text{S}(=\text{O})_2\text{NR}^h\text{R}^h$ ,  
 $-\text{S}(=\text{O})_2\text{N}(\text{R}^h)\text{C}(=\text{O})(\text{C}_{1-8}\text{alkyl})$ ,  $-\text{S}(=\text{O})_2\text{N}(\text{R}^h)\text{C}(=\text{O})\text{O}(\text{C}_{1-8}\text{alkyl})$ ,  
25  $-\text{S}(=\text{O})_2\text{N}(\text{R}^h)\text{C}(=\text{O})\text{NR}^h\text{R}^h$ ,  $-\text{NR}^h\text{R}^h$ ,  $-\text{N}(\text{R}^h)\text{C}(=\text{O})(\text{C}_{1-8}\text{alkyl})$ ,  
 $-\text{N}(\text{R}^h)\text{C}(=\text{O})\text{O}(\text{C}_{1-8}\text{alkyl})$ ,  $-\text{N}(\text{R}^h)\text{C}(=\text{O})\text{NR}^h\text{R}^h$ ,  $-\text{N}(\text{R}^h)\text{C}(=\text{NR}^h)\text{NR}^h\text{R}^h$ ,  
 $-\text{N}(\text{R}^h)\text{S}(=\text{O})_2(\text{C}_{1-8}\text{alkyl})$ ,  $-\text{N}(\text{R}^h)\text{S}(=\text{O})_2\text{NR}^h\text{R}^h$ ,  $-\text{NR}^h\text{C}_{2-6}\text{alkylNR}^h\text{R}^h$  and  
 $-\text{NR}^h\text{C}_{2-6}\text{alkylOR}^h$ .

30 76. The compound according to Claim 56, wherein  $\text{R}^{11}$  and  $\text{R}^{13}$  are  
independently, at each instance, selected from H,  $\text{C}_{1-8}\text{alkyl}$ ,  $\text{C}_{1-4}\text{haloalkyl}$ , halo,  
cyano, nitro,  $-\text{C}(=\text{O})(\text{C}_{1-8}\text{alkyl})$ ,  $-\text{C}(=\text{O})\text{O}(\text{C}_{1-8}\text{alkyl})$ ,  $-\text{C}(=\text{O})\text{NR}^h\text{R}^h$ ,

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- C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>, -OR<sup>h</sup>, -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>h</sup>R<sup>h</sup>,
- OC(=O)N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -OC<sub>2-6</sub>alkylOR<sup>h</sup>, -SR<sup>h</sup>,
- S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>,
- S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl),
- 5 -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl),
- N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>,
- N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>,
- NR<sup>h</sup>C<sub>2-6</sub>alkylOR<sup>h</sup> and C<sub>1-4</sub>alkyl substituted by 0, 1, 2 or 3 groups selected from C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl),
- 10 -C(=O)NR<sup>h</sup>R<sup>h</sup>, -C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>, -OR<sup>h</sup>, -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>h</sup>R<sup>h</sup>,
- OC(=O)N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -OC<sub>2-6</sub>alkylOR<sup>h</sup>, -SR<sup>h</sup>,
- S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>,
- S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl),
- S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl),
- 15 -N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>,
- N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup> and
- NR<sup>h</sup>C<sub>2-6</sub>alkylOR<sup>h</sup>.

77. The compound according to Claim 56, wherein R<sup>12</sup> is

- 20 independently, at each instance, selected from H, C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)O(C<sub>1-8</sub>alkyl), -C(=O)NR<sup>h</sup>R<sup>h</sup>, -C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>, -OR<sup>h</sup>, -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>h</sup>R<sup>h</sup>, -OC(=O)N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -OC<sub>2-6</sub>alkylOR<sup>h</sup>, -SR<sup>h</sup>, -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl),
- 25 -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup> and -NR<sup>h</sup>C<sub>2-6</sub>alkylOR<sup>h</sup>; or R<sup>12</sup> is C<sub>1-4</sub>alkyl substituted by 0, 1, 2 or 3 groups selected from C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)(C<sub>1-8</sub>alkyl), -C(=O)O(C<sub>1-8</sub>alkyl),
- 30 -C(=O)NR<sup>h</sup>R<sup>h</sup>, -C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>, -OR<sup>h</sup>, -OC(=O)(C<sub>1-8</sub>alkyl), -OC(=O)NR<sup>h</sup>R<sup>h</sup>, -OC(=O)N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -OC<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup>, -OC<sub>2-6</sub>alkylOR<sup>h</sup>, -SR<sup>h</sup>, -S(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>,

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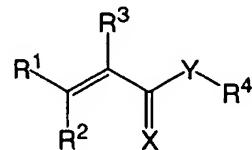
- S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl), -S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl),
- S(=O)<sub>2</sub>N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=O)(C<sub>1-8</sub>alkyl),
- N(R<sup>h</sup>)C(=O)O(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)C(=O)NR<sup>h</sup>R<sup>h</sup>, -N(R<sup>h</sup>)C(=NR<sup>h</sup>)NR<sup>h</sup>R<sup>h</sup>,
- N(R<sup>h</sup>)S(=O)<sub>2</sub>(C<sub>1-8</sub>alkyl), -N(R<sup>h</sup>)S(=O)<sub>2</sub>NR<sup>h</sup>R<sup>h</sup>, -NR<sup>h</sup>C<sub>2-6</sub>alkylNR<sup>h</sup>R<sup>h</sup> and
- 5 -NR<sup>h</sup>C<sub>2-6</sub>alkylOR<sup>h</sup>.

78. The compound according to Claim 56, wherein Y is O.

79. The compound according to Claim 56, wherein Y is S.

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80. A compound having the structure:



wherein:

- X is O, S or NR<sup>m</sup>;
- 15 n is independently, at each instance, 0, 1 or 2;
- o is independently, at each instance, 0, 1, 2 or 3;
- R<sup>m</sup> is independently at each instance H or R<sup>n</sup>;
- R<sup>n</sup> is independently at each instance C<sub>1-8</sub>alkyl, phenyl or benzyl;
- R<sup>q</sup> is independently in each instance H, C<sub>1-4</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo,
- 20 cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>,
- OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- 25 -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>;
- R<sup>s</sup> is R<sup>n</sup> substituted by 0, 1, 2 or 3 substituents independently selected from R<sup>q</sup>;
- R<sup>3</sup> is H or C<sub>1-4</sub>alkyl;

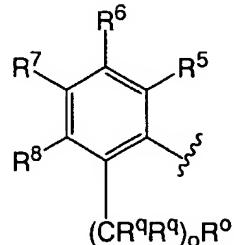
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$R^5$  is H,  $C_{1-9}$ alkyl,  $C_{1-4}$ haloalkyl, halo, nitro, cyano,  $-OC_{1-6}$ alkyl,  $-O-C_{1-4}$ haloalkyl,  $-O-C_{1-6}$ alkyl $NR^mR^m$ ,  $-O-C_{1-6}$ alkyl $OR^m$ ,  $-NR^mR^m$ ,  $-NR^m-C_{1-4}$ haloalkyl,  $-NR^m-C_{1-6}$ alkyl $NR^mR^m$ ,  $-NR^m-C_{1-6}$ alkyl $OR^m$ , or  $-(CH_2)_nR^c$

$R^6$  is, independently at each instance, H,  $C_{1-9}$ alkyl,  $C_{1-4}$ haloalkyl, halo, nitro, cyano,  $-OC_{1-6}$ alkyl,  $-O-C_{1-4}$ haloalkyl,  $-O-C_{1-6}$ alkyl $NR^mR^m$ ,  $-O-C_{1-6}$ alkyl $OR^m$ ,  $-NR^mR^m$ ,  $-NR^m-C_{1-4}$ haloalkyl,  $-NR^m-C_{1-6}$ alkyl $NR^mR^m$  or  $-NR^m-C_{1-6}$ alkyl $OR^m$ ;

$R^8$  is H,  $C_{1-9}$ alkyl,  $C_{1-4}$ haloalkyl, halo, nitro, cyano,  $-OC_{1-6}$ alkyl,  $-O-C_{1-4}$ haloalkyl,  $-O-C_{1-6}$ alkyl $NR^mR^m$ ,  $-O-C_{1-6}$ alkyl $OR^m$ ,  $-NR^mR^m$ ,  $-NR^m-C_{1-4}$ haloalkyl,  $-NR^m-C_{1-6}$ alkyl $NR^mR^m$  or  $-NR^m-C_{1-6}$ alkyl $OR^m$ ; and

(A)  $R^1$  is



$R^2$  is H,  $-OR^m$ , halo,  $C_{1-3}$ haloalkyl or  $C_{1-6}$ alkyl;

$R^4$  is a saturated or unsaturated 5- or 6-membered ring containing 0, 1, 2 or 3 atoms selected from O, N and S that is optionally vicinally fused with a saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected from O, N and S with the remaining atoms being carbon, so long as the combination of O and S atoms is not greater than 2, wherein the ring and bridge are substituted by 0, 1, 2 or 3 substituents independently selected from  $C_{1-8}$ alkyl,  $C_{1-4}$ haloalkyl, halo, cyano, nitro,  $-C(=O)R^n$ ,  $-C(=O)OR^n$ ,  $-C(=O)NR^mR^m$ ,  $-C(=NR^m)NR^mR^m$ ,  $-OR^m$ ,  $-OC(=O)R^n$ ,  $-OC(=O)NR^mR^m$ ,  $-OC(=O)N(R^m)S(=O)R^n$ ,  $-OC_{2-6}$ alkyl $NR^mR^m$ ,  $-OC_{2-6}$ alkyl $OR^m$ ,  $-SR^m$ ,  $-S(=O)R^n$ ,  $-S(=O)_2R^n$ ,  $-S(=O)_2NR^mR^m$ ,  $-S(=O)_2N(R^m)C(=O)R^n$ ,  $-S(=O)_2N(R^m)C(=O)OR^n$ ,  $-S(=O)_2N(R^m)C(=O)NR^mR^m$ ,  $-NR^mR^m$ ,  $-N(R^m)C(=O)R^n$ ,  $-N(R^m)C(=O)OR^n$ ,  $-N(R^m)C(=O)NR^mR^m$ ,  $-N(R^m)C(=NR^m)NR^mR^m$ ,  $-N(R^m)S(=O)R^n$ ,  $-N(R^m)S(=O)NR^mR^m$ ,  $-NR^mC_{2-6}$ alkyl $NR^mR^m$ ,  $-NR^mC_{2-6}$ alkyl $OR^m$ ,  $-C(=O)R^s$ ,  $-C(=O)OR^s$ ,  $-C(=O)NR^mR^s$ ,  $-C(=NR^m)NR^mR^s$ ,  $-OR^s$ ,  $-OC(=O)R^s$ ,  $-OC(=O)NR^mR^s$ ,  $-OC(=O)N(R^m)S(=O)R^s$ ,  $-OC_{2-6}$ alkyl $NR^mR^s$ ,  $-OC_{2-6}$ alkyl $OR^s$ ,

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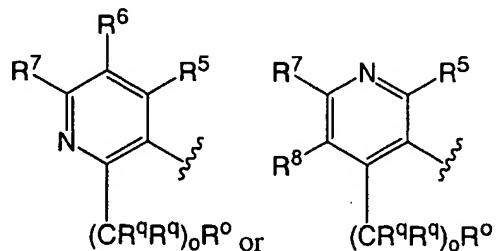
- SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>,
- N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,
- N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup>
- 5 and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>,
- OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- 10 -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,
- OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>,
- OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- 15 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; and the ring and bridge carbon atoms are substituted with 0, 1 or 2 =O groups;
- 20 R<sup>7</sup> is C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OC<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>;
- R<sup>6</sup> is a saturated, partially-saturated or unsaturated 5-, 6- or 7-membered monocyclic or 7-, 8-, 9-, 10- or 11-membered bicyclic ring containing 0, 1, 2, 3 or 25 4 atoms selected from N, O and S, so long as the combination of O and S atoms is not greater than 2, wherein the carbon atoms of the ring are substituted by 0, 1 or 2 oxo groups, wherein the ring is substituted by 0, 1, 2 or 3 substituents independently selected from R<sup>P</sup>;
- 30 R<sup>P</sup> is independently at each instance C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>,
- OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,

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-S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,  
 -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,  
 -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,  
 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; and

5 Y is O or NH; or

(B) R<sup>1</sup> is



R<sup>2</sup> is H, -OR<sup>m</sup>, halo, C<sub>1-3</sub>haloalkyl or C<sub>1-6</sub>alkyl;

R<sup>4</sup> is a saturated or unsaturated 5- or 6-membered ring containing 0, 1, 2 or

10 3 atoms selected from O, N and S that is optionally vicinally fused with a  
 saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected  
 from O, N and S with the remaining atoms being carbon, so long as the  
 combination of O and S atoms is not greater than 2, wherein the ring and bridge  
 are substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-8</sub>alkyl,  
 C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>,  
 -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>,  
 -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>,  
 -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>,  
 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>,  
 15 -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>,  
 -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>,  
 -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>,  
 -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>,  
 -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>,  
 20 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>,  
 -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,  
 -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup>  
 and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo,

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cyano, nitro,  $-C(=O)R^n$ ,  $-C(=O)OR^n$ ,  $-C(=O)NR^mR^m$ ,  $-C(=NR^m)NR^mR^m$ ,  $-OR^m$ ,  
 $-OC(=O)R^n$ ,  $-OC(=O)NR^mR^m$ ,  $-OC(=O)N(R^m)S(=O)_2R^n$ ,  $-OC_{2-6}alkylNR^mR^m$ ,  
 $-OC_{2-6}alkylOR^m$ ,  $-SR^m$ ,  $-S(=O)R^n$ ,  $-S(=O)_2R^n$ ,  $-S(=O)_2NR^mR^m$ ,  
 $-S(=O)_2N(R^m)C(=O)R^n$ ,  $-S(=O)_2N(R^m)C(=O)OR^n$ ,  $-S(=O)_2N(R^m)C(=O)NR^mR^m$ ,

5  $-NR^mR^m$ ,  $-N(R^m)C(=O)R^n$ ,  $-N(R^m)C(=O)OR^n$ ,  $-N(R^m)C(=O)NR^mR^m$ ,  
 $-N(R^m)C(=NR^m)NR^mR^m$ ,  $-N(R^m)S(=O)_2R^n$ ,  $-N(R^m)S(=O)_2NR^mR^m$ ,  
 $-NR^mC_{2-6}alkylNR^mR^m$ ,  $-C(=O)R^s$ ,  $-C(=O)OR^s$ ,  $-C(=O)NR^mR^s$ ,  $-C(=NR^m)NR^mR^s$ ,  
 $-OR^s$ ,  $-OC(=O)R^s$ ,  $-OC(=O)NR^mR^s$ ,  $-OC(=O)N(R^m)S(=O)_2R^s$ ,  $-OC_{2-6}alkylNR^mR^s$ ,  
 $-OC_{2-6}alkylOR^s$ ,  $-SR^s$ ,  $-S(=O)R^s$ ,  $-S(=O)_2R^s$ ,  $-S(=O)_2NR^mR^s$ ,

10  $-S(=O)_2N(R^m)C(=O)R^s$ ,  $-S(=O)_2N(R^m)C(=O)OR^s$ ,  $-S(=O)_2N(R^m)C(=O)NR^mR^s$ ,  
 $-NR^mR^s$ ,  $-N(R^m)C(=O)R^s$ ,  $-N(R^m)C(=O)OR^s$ ,  $-N(R^m)C(=O)NR^mR^s$ ,  
 $-N(R^m)C(=NR^m)NR^mR^s$ ,  $-N(R^m)S(=O)_2R^s$ ,  $-N(R^m)S(=O)_2NR^mR^s$ ,  
 $-NR^mC_{2-6}alkylNR^mR^s$ ,  $-NR^mC_{2-6}alkylOR^s$  and  $-NR^mC_{2-6}alkylOR^m$ ; and the ring  
and bridge carbon atoms are substituted with 0, 1 or 2 =O groups;

15  $R^7$  is  $C_{1-9}alkyl$ ,  $C_{1-4}haloalkyl$ , halo, nitro, cyano,  $-OC_{1-6}alkyl$ ,  
 $-O-C_{1-4}haloalkyl$ ,  $-O-C_{1-6}alkylNR^mR^m$ ,  $-O-C_{1-6}alkylOR^m$ ,  $-NR^mR^m$ ,  
 $-NR^m-C_{1-4}haloalkyl$ ,  $-NR^m-C_{1-6}alkylNR^mR^m$  or  $-NR^m-C_{1-6}alkylOR^m$ ;

$R^o$  is a saturated, partially-saturated or unsaturated 5-, 6- or 7-membered  
monocyclic or 7-, 8-, 9-, 10- or 11-membered bicyclic ring containing 0, 1, 2, 3 or  
20 4 atoms selected from N, O and S, so long as the combination of O and S atoms is  
not greater than 2, wherein the carbon atoms of the ring are substituted by 0, 1 or  
2 oxo groups, wherein the ring is substituted by 0, 1, 2 or 3 substituents  
independently selected from  $R^p$ ;

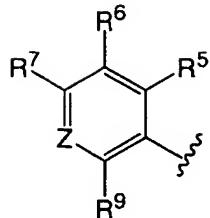
$R^p$  is independently at each instance  $C_{1-8}alkyl$ ,  $C_{1-4}haloalkyl$ , halo, cyano,  
25 nitro,  $-C(=O)R^n$ ,  $-C(=O)OR^n$ ,  $-C(=O)NR^mR^m$ ,  $-C(=NR^m)NR^mR^m$ ,  $-OR^m$ ,  
 $-OC(=O)R^n$ ,  $-OC(=O)NR^mR^m$ ,  $-OC(=O)N(R^m)S(=O)_2R^n$ ,  $-OC_{2-6}alkylNR^mR^m$ ,  
 $-OC_{2-6}alkylOR^m$ ,  $-SR^m$ ,  $-S(=O)R^n$ ,  $-S(=O)_2R^n$ ,  $-S(=O)_2NR^mR^m$ ,  
 $-S(=O)_2N(R^m)C(=O)R^n$ ,  $-S(=O)_2N(R^m)C(=O)OR^n$ ,  $-S(=O)_2N(R^m)C(=O)NR^mR^m$ ,  
 $-NR^mR^m$ ,  $-N(R^m)C(=O)R^n$ ,  $-N(R^m)C(=O)OR^n$ ,  $-N(R^m)C(=O)NR^mR^m$ ,

30  $-N(R^m)C(=NR^m)NR^mR^m$ ,  $-N(R^m)S(=O)_2R^n$ ,  $-N(R^m)S(=O)_2NR^mR^m$ ,  
 $-NR^mC_{2-6}alkylNR^mR^m$  or  $-NR^mC_{2-6}alkylOR^m$ ; and

Y is O or NH; or

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(C) R<sup>1</sup> is



R<sup>2</sup> is H, -OR<sup>m</sup>, halo, C<sub>1-3</sub>haloalkyl or C<sub>1-6</sub>alkyl;

R<sup>4</sup> is a saturated, partially-saturated or unsaturated 8-, 9-, 10 or

5 11-membered bicyclic heterocycle containing 1, 2, 3, 4 or 5 atoms selected from O, N and S, so long as the combination of O and S atoms is not greater than 2, but excluding quinolin-6-yl, 4,5,6,7-tetrahydro-benzo[b]thiophen-2-yl, benzothiazol-2-yl, 2,3-dihydro-benzo[1,4]dioxin-6-yl, wherein the heterocycle is substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-9</sub>alkyl, oxo, C<sub>1-4</sub>haloalkyl, 10 halo, nitro, cyano, -OR<sup>m</sup>, -S(=O)<sub>n</sub>C<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>, -C(=O)C<sub>1-6</sub>alkyl, -OC(=O)C<sub>1-6</sub>alkyl, -C(=O)NR<sup>m</sup>C<sub>1-6</sub>alkyl, -NR<sup>m</sup>C(=O)C<sub>1-6</sub>alkyl -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, 15 -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)NR<sup>m</sup>R<sup>s</sup>, -S(=O)N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, 20 -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)R<sup>n</sup>, -S(=O)NR<sup>m</sup>R<sup>m</sup>, -S(=O)N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, 25 -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)NR<sup>m</sup>R<sup>s</sup>,

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-S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,

-NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,

-N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,

-NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; wherein R<sup>4</sup> is

5 not 2-aminocarbonylmethyl-2,3-dihydro-benzo[1,4]dioxin-8-yl, 2-cyanomethyl-2,3-dihydro-benzo[1,4]dioxin-8-yl, quinolin-3-yl, 3H-quinazolin-4-on-3-yl, benzo[1,3]dioxol-5-yl, 3,3-dimethyl-1,3-dihydro-indol-2-on-6-yl or 4,4-dimethyl-3,4-dihydro-1H-quinolin-2-on-7-yl;

R<sup>7</sup> is C<sub>1-8</sub>alkyl, C<sub>1-5</sub>haloalkyl, I or Br

10 R<sup>9</sup> is H, C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OC<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>, or -(CH<sub>2</sub>)<sub>n</sub>R<sup>c</sup>;

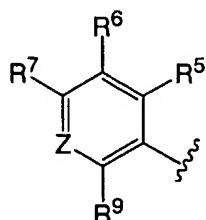
R<sup>9</sup> is independently, at each instance, H, C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OC<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>,

15 -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>;

Y is NH; and

Z is CR<sup>8</sup> or N; or

(D) R<sup>1</sup> is



20

R<sup>2</sup> is C<sub>1-6</sub>alkyl substituted by 1, 2 or 3 substituents selected from

C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>,

-C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>,

-OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>,

25 -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>,

-S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>,

-N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>,

-N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; or

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$R^2$  is  $-(C(R^q)_2)_o$ phenyl, wherein the phenyl is substituted by 0, 1, 2 or 3 substituents independently selected from  $C_{1-8}$ alkyl,  $C_{1-4}$ haloalkyl, halo, cyano, nitro,  $-C(=O)R^n$ ,  $-C(=O)OR^n$ ,  $-C(=O)NR^mR^m$ ,  $-C(=NR^m)NR^mR^m$ ,  $-OR^m$ ,  $-OC(=O)R^n$ ,  $-OC(=O)NR^mR^m$ ,  $-OC(=O)N(R^m)S(=O)_2R^n$ ,  $-OC_{2-6}$ alkyl $NR^mR^m$ ,  $5$   $-OC_{2-6}$ alkyl $OR^m$ ,  $-SR^m$ ,  $-S(=O)R^n$ ,  $-S(=O)_2R^n$ ,  $-S(=O)_2NR^mR^m$ ,  $-S(=O)_2N(R^m)C(=O)R^n$ ,  $-S(=O)_2N(R^m)C(=O)OR^n$ ,  $-S(=O)_2N(R^m)C(=O)NR^mR^m$ ,  $-NR^mR^m$ ,  $-N(R^m)C(=O)R^n$ ,  $-N(R^m)C(=O)OR^n$ ,  $-N(R^m)C(=O)NR^mR^m$ ,  $-N(R^m)C(=NR^m)NR^mR^m$ ,  $-N(R^m)S(=O)_2R^n$ ,  $-N(R^m)S(=O)_2NR^mR^m$ ,  $-NR^mC_{2-6}$ alkyl $NR^mR^m$ ,  $-NR^mC_{2-6}$ alkyl $OR^m$ ,  $-C(=O)R^s$ ,  $-C(=O)OR^s$ ,  $10$   $-C(=O)NR^mR^s$ ,  $-C(=NR^m)NR^mR^s$ ,  $-OR^s$ ,  $-OC(=O)R^s$ ,  $-OC(=O)NR^mR^s$ ,  $-OC(=O)N(R^m)S(=O)_2R^s$ ,  $-OC_{2-6}$ alkyl $NR^mR^s$ ,  $-OC_{2-6}$ alkyl $OR^s$ ,  $-SR^s$ ,  $-S(=O)_2R^s$ ,  $-S(=O)_2NR^mR^s$ ,  $-S(=O)_2N(R^m)C(=O)R^s$ ,  $-S(=O)_2N(R^m)C(=O)OR^s$ ,  $-S(=O)_2N(R^m)C(=O)NR^mR^s$ ,  $-NR^mR^s$ ,  $-N(R^m)C(=O)R^s$ ,  $-N(R^m)C(=O)OR^s$ ,  $-N(R^m)C(=O)NR^mR^s$ ,  $-N(R^m)C(=NR^m)NR^mR^s$ ,  $-N(R^m)S(=O)_2R^s$ ,  $15$   $-N(R^m)S(=O)_2NR^mR^s$ ,  $-NR^mC_{2-6}$ alkyl $NR^mR^s$ ,  $-NR^mC_{2-6}$ alkyl $OR^s$  and  $C_{1-4}$ alkyl substituted by 1 or 2 groups selected from  $C_{1-2}$ haloalkyl, halo, cyano, nitro,  $-C(=O)R^n$ ,  $-C(=O)OR^n$ ,  $-C(=O)NR^mR^m$ ,  $-C(=NR^m)NR^mR^m$ ,  $-OR^m$ ,  $-OC(=O)R^n$ ,  $-OC(=O)NR^mR^m$ ,  $-OC(=O)N(R^m)S(=O)_2R^n$ ,  $-OC_{2-6}$ alkyl $NR^mR^m$ ,  $-OC_{2-6}$ alkyl $OR^m$ ,  $-SR^m$ ,  $-S(=O)R^n$ ,  $-S(=O)_2R^n$ ,  $-S(=O)_2NR^mR^m$ ,  $-S(=O)_2N(R^m)C(=O)R^n$ ,  $20$   $-S(=O)_2N(R^m)C(=O)OR^n$ ,  $-S(=O)_2N(R^m)C(=O)NR^mR^m$ ,  $-NR^mR^m$ ,  $-N(R^m)C(=O)R^n$ ,  $-N(R^m)C(=O)OR^n$ ,  $-N(R^m)C(=O)NR^mR^m$ ,  $-N(R^m)C(=NR^m)NR^mR^m$ ,  $-N(R^m)S(=O)_2R^n$ ,  $-N(R^m)S(=O)_2NR^mR^m$ ,  $-NR^mC_{2-6}$ alkyl $NR^mR^m$ ,  $-C(=O)R^s$ ,  $-C(=O)OR^s$ ,  $-C(=O)NR^mR^s$ ,  $-C(=NR^m)NR^mR^s$ ,  $-OR^s$ ,  $-OC(=O)R^s$ ,  $-OC(=O)NR^mR^s$ ,  $-OC(=O)N(R^m)S(=O)_2R^s$ ,  $-OC_{2-6}$ alkyl $NR^mR^s$ ,  $25$   $-OC_{2-6}$ alkyl $OR^s$ ,  $-SR^s$ ,  $-S(=O)R^s$ ,  $-S(=O)_2R^s$ ,  $-S(=O)_2NR^mR^s$ ,  $-S(=O)_2N(R^m)C(=O)R^s$ ,  $-S(=O)_2N(R^m)C(=O)OR^s$ ,  $-S(=O)_2N(R^m)C(=O)NR^mR^s$ ,  $-NR^mR^s$ ,  $-N(R^m)C(=O)R^s$ ,  $-N(R^m)C(=O)OR^s$ ,  $-N(R^m)C(=O)NR^mR^s$ ,  $-N(R^m)C(=NR^m)NR^mR^s$ ,  $-N(R^m)S(=O)_2R^s$ ,  $-N(R^m)S(=O)_2NR^mR^s$ ,  $-NR^mC_{2-6}$ alkyl $NR^mR^s$ ,  $-NR^mC_{2-6}$ alkyl $OR^s$  and  $-NR^mC_{2-6}$ alkyl $OR^m$ ; or  $30$   $R^2$  is  $-(C(R^q)_2)_oR^r$ , wherein  $R^r$  is a saturated or unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 heteroatoms independently selected from N, O and S, wherein no more than 2 of the ring members are O or S,

wherein the heterocycle is optionally fused with a phenyl ring, and the heterocycle or fused phenyl ring is substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>,

5 -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)R<sup>n</sup>,

10 -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,

15 -N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,

20 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>,

25 -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>;

30 R<sup>4</sup> is a saturated or unsaturated 5- or 6-membered ring containing 0, 1, 2 or 3 atoms selected from O, N and S that is optionally vicinally fused with a saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected

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from O, N and S with the remaining atoms being carbon, so long as the combination of O and S atoms is not greater than 2, wherein the ring and bridge are substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>,

5 -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>,  
 -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>,  
 -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>,  
 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>,  
 -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)R<sup>n</sup>,

10 -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>,  
 -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>,  
 -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>,  
 -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>,  
 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>,  

15 -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,  
 -N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup>  
 and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo,  
 cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>,  
 -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>,  

20 -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,  
 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,  
 -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,  
 -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,  
 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,  

25 -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>,  
 -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,  
 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,  
 -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,  
 -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,  

30 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, and the ring  
 and bridge carbon atoms are substituted with 0, 1 or 2 =O groups;

R<sup>7</sup> is C<sub>2-8</sub>alkyl, C<sub>1-5</sub>haloalkyl, I, Br;

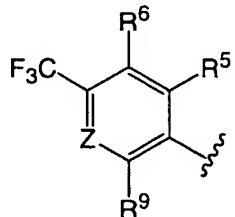
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$R^9$  is independently, at each instance, H,  $C_{1-9}alkyl$ ,  $C_{1-4}haloalkyl$ , halo, nitro, cyano,  $-OC_{1-6}alkyl$ ,  $-O-C_{1-4}haloalkyl$ ,  $-O-C_{1-6}alkylNR^mR^m$ ,  $-O-C_{1-6}alkylOR^m$ ,  $-NR^mR^m$ ,  $-NR^m-C_{1-4}haloalkyl$ ,  $-NR^m-C_{1-6}alkylNR^mR^m$  or  $-NR^m-C_{1-6}alkylOR^m$ ;

5 Y is NH; and

Z is CR<sup>8</sup> or N; or

(E)  $R^I$  is



$R^2$  is H, -OR<sup>m</sup>, Cl, C<sub>1-3</sub>haloalkyl or C<sub>1-6</sub>alkyl;

10       $R^4$  is a saturated or unsaturated 5- or 6-membered ring containing 0, 1, 2 or 3 atoms selected from O, N and S, so long as the combination of O and S atoms is not greater than 1, wherein the ring is substituted by 0, 1, 2 or 3 substituents independently selected from  $C_{1-8}$ alkyl,  $C_{1-4}$ haloalkyl, halo, cyano, nitro,  $-C(=O)NR^mR^m$ ,  $-C(=NR^m)NR^mR^m$ ,  $-OR^n$ ,  $-OC(=O)R^n$ ,  $-OC(=O)NR^mR^m$ ,  
 15       $-OC(=O)N(R^m)S(=O)_2R^n$ ,  $-OC_{2-6}$ alkyl $OR^m$ ,  $-SR^m$ ,  $-S(=O)R^n$ ,  $-S(=O)_2R^n$ ,  
 $-S(=O)_2NR^mR^m$ ,  $-S(=O)_2N(R^m)C(=O)R^n$ ,  $-S(=O)_2N(R^m)C(=O)OR^n$ ,  
 $-S(=O)_2N(R^m)C(=O)NR^mR^m$ ,  $-NR^mR^m$ ,  $-N(R^m)C(=O)R^n$ ,  $-N(R^m)C(=O)OR^n$ ,  
 $-N(R^m)C(=O)NR^mR^m$ ,  $-N(R^m)C(=NR^m)NR^mR^m$ ,  $-N(R^m)S(=O)_2R^n$ ,  
 $-N(R^m)S(=O)_2NR^mR^m$ ,  $-NR^mC_{2-6}$ alkyl $NR^mR^m$ ,  $-NR^mC_{2-6}$ alkyl $OR^m$ ,  $-C(=O)R^s$ ,  
 20       $-C(=O)OR^s$ ,  $-C(=O)NR^mR^s$ ,  $-C(=NR^m)NR^mR^s$ ,  $-OR^s$ ,  $-OC(=O)R^s$ ,  
 $-OC(=O)NR^mR^s$ ,  $-OC(=O)N(R^m)S(=O)_2R^s$ ,  $-OC_{2-6}$ alkyl $NR^mR^s$ ,  $-OC_{2-6}$ alkyl $OR^s$ ,  
 $-SR^s$ ,  $-S(=O)R^s$ ,  $-S(=O)_2R^s$ ,  $-S(=O)_2NR^mR^s$ ,  $-S(=O)_2N(R^m)C(=O)R^s$ ,  
 $-S(=O)_2N(R^m)C(=O)OR^s$ ,  $-S(=O)_2N(R^m)C(=O)NR^mR^s$ ,  $-NR^mR^s$ ,  $-N(R^m)C(=O)R^s$ ,  
 $-N(R^m)C(=O)OR^s$ ,  $-N(R^m)C(=O)NR^mR^s$ ,  $-N(R^m)C(=NR^m)NR^mR^s$ ,  
 25       $-N(R^m)S(=O)_2R^s$ ,  $-N(R^m)S(=O)_2NR^mR^s$ ,  $-NR^mC_{2-6}$ alkyl $NR^mR^s$ ,  $-NR^mC_{2-6}$ alkyl $OR^s$   
 and  $C_{1-4}$ alkyl substituted by 1 or 2 groups selected from  $C_{1-2}$ haloalkyl, halo, cyano, nitro,  $-C(=O)R^n$ ,  $-C(=O)NR^mR^m$ ,  $-C(=NR^m)NR^mR^m$ ,  $-OR^m$ ,  $-OC(=O)R^n$ ,  
 $-OC(=O)NR^mR^m$ ,  $-OC(=O)N(R^m)S(=O)_2R^n$ ,  $-OC_{2-6}$ alkyl $NR^mR^m$ ,  $-OC_{2-6}$ alkyl $OR^m$ ,

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$\text{-SR}^m$ ,  $\text{-S(=O)R}^n$ ,  $\text{-S(=O)}_2\text{R}^n$ ,  $\text{-S(=O)}_2\text{NR}^m\text{R}^m$ ,  $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)R}^n$ ,  
 $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)OR}^n$ ,  $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)NR}^m\text{R}^m$ ,  $\text{-NR}^m\text{R}^m$ ,  
 $\text{-N(R}^m\text{)C(=O)R}^n$ ,  $\text{-N(R}^m\text{)C(=O)OR}^n$ ,  $\text{-N(R}^m\text{)C(=O)NR}^m\text{R}^m$ ,  
 $\text{-N(R}^m\text{)C(=NR}^m\text{)NR}^m\text{R}^m$ ,  $\text{-N(R}^m\text{)S(=O)}_2\text{R}^n$ ,  $\text{-N(R}^m\text{)S(=O)}_2\text{NR}^m\text{R}^m$ ,  
5     $\text{-NR}^m\text{C}_{2-6}\text{alkylNR}^m\text{R}^m$ ,  $\text{-C(=O)R}^s$ ,  $\text{-C(=O)OR}^s$ ,  $\text{-C(=O)NR}^m\text{R}^s$ ,  $\text{-C(=NR}^m\text{)NR}^m\text{R}^s$ ,  
 $\text{-OR}^s$ ,  $\text{-OC(=O)R}^s$ ,  $\text{-OC(=O)NR}^m\text{R}^s$ ,  $\text{-OC(=O)N(R}^m\text{)S(=O)}_2\text{R}^s$ ,  $\text{-OC}_{2-6}\text{alkylNR}^m\text{R}^s$ ,  
 $\text{-OC}_{2-6}\text{alkylOR}^s$ ,  $\text{-SR}^s$ ,  $\text{-S(=O)R}^s$ ,  $\text{-S(=O)}_2\text{R}^s$ ,  $\text{-S(=O)}_2\text{NR}^m\text{R}^s$ ,  
 $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)R}^s$ ,  $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)OR}^s$ ,  $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)NR}^m\text{R}^s$ ,  
10    $\text{-NR}^m\text{R}^s$ ,  $\text{-N(R}^m\text{)C(=O)R}^s$ ,  $\text{-N(R}^m\text{)C(=O)OR}^s$ ,  $\text{-N(R}^m\text{)C(=O)NR}^m\text{R}^s$ ,  
 $\text{-NR}^m\text{C}_{2-6}\text{alkylNR}^m\text{R}^s$ ,  $\text{-NR}^m\text{C}_{2-6}\text{alkylOR}^s$  and  $\text{-NR}^m\text{C}_{2-6}\text{alkylOR}^m$ ; wherein  $R^4$  is  
not unsubstituted phenyl];

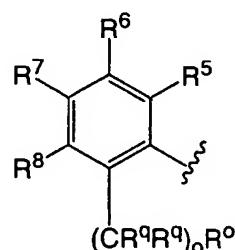
$R^9$  is independently, at each instance, H,  $C_{1-9}$ alkyl,  $C_{1-4}$ haloalkyl, halo,  
nitro, cyano,  $\text{-OC}_{1-6}$ alkyl,  $\text{-O-C}_{1-4}$ haloalkyl,  $\text{-O-C}_{1-6}$ alkylNR<sup>m</sup>R<sup>m</sup>,  
15    $\text{-O-C}_{1-6}$ alkylOR<sup>m</sup>,  $\text{-NR}^m\text{R}^m$ ,  $\text{-NR}^m\text{-C}_{1-4}$ haloalkyl,  $\text{-NR}^m\text{-C}_{1-6}$ alkylNR<sup>m</sup>R<sup>m</sup> or  
 $\text{-NR}^m\text{-C}_{1-6}$ alkylOR<sup>m</sup>;

Y is NH; and

Z is CR<sup>8</sup> or N.

20       81. A compound according to Claim 80, wherein:

$R^1$  is



$R^2$  is H,  $\text{-OR}^m$ , halo,  $C_{1-3}$ haloalkyl or  $C_{1-6}$ alkyl;

$R^4$  is a saturated or unsaturated 5- or 6-membered ring containing 0, 1, 2 or  
25   3 atoms selected from O, N and S that is optionally vicinally fused with a  
saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected  
from O, N and S with the remaining atoms being carbon, so long as the  
combination of O and S atoms is not greater than 2, wherein the ring and bridge

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are substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-8</sub>alkyl,  
C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>,  
-C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>,  
-OC(=O)N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>,  
5 -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>,  
-S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>,  
-N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>,  
-N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>,  
-C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>,  
10 -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>,  
-SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>,  
-S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>,  
-N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,  
-N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup>  
15 and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo,  
cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>,  
-OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>,  
-OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,  
-S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,  
20 -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,  
-N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,  
-NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,  
-OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>,  
-OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,  
25 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,  
-NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,  
-N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,  
-NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; and the ring  
and bridge carbon atoms are substituted with 0, 1 or 2 =O groups;  
30 R<sup>7</sup> is C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OC<sub>1-6</sub>alkyl,  
-O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>,  
-NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>;

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$R^o$  is a saturated, partially-saturated or unsaturated 5-, 6- or 7-membered monocyclic or 7-, 8-, 9-, 10- or 11-membered bicyclic ring containing 0, 1, 2, 3 or 4 atoms selected from N, O and S, so long as the combination of O and S atoms is not greater than 2, wherein the carbon atoms of the ring are substituted by 0, 1 or

5 2 oxo groups, wherein the ring is substituted by 0, 1, 2 or 3 substituents independently selected from  $R^p$ ;

$R^p$  is independently at each instance  $C_{1-8}alkyl$ ,  $C_{1-4}haloalkyl$ , halo, cyano, nitro,  $-C(=O)R^n$ ,  $-C(=O)OR^n$ ,  $-C(=O)NR^mR^m$ ,  $-C(=NR^m)NR^mR^m$ ,  $-OR^m$ ,  $-OC(=O)R^n$ ,  $-OC(=O)NR^mR^m$ ,  $-OC(=O)N(R^m)S(=O)_2R^n$ ,  $-OC_{2-6}alkylNR^mR^m$ ,  
 10  $-OC_{2-6}alkylOR^m$ ,  $-SR^m$ ,  $-S(=O)R^n$ ,  $-S(=O)_2R^n$ ,  $-S(=O)_2NR^mR^m$ ,  
 $-S(=O)_2N(R^m)C(=O)R^n$ ,  $-S(=O)_2N(R^m)C(=O)OR^n$ ,  $-S(=O)_2N(R^m)C(=O)NR^mR^m$ ,  
 $-NR^mR^m$ ,  $-N(R^m)C(=O)R^n$ ,  $-N(R^m)C(=O)OR^n$ ,  $-N(R^m)C(=O)NR^mR^m$ ,  
 $-N(R^m)C(=NR^m)NR^mR^m$ ,  $-N(R^m)S(=O)_2R^n$ ,  $-N(R^m)S(=O)_2NR^mR^m$ ,  
 $-NR^mC_{2-6}alkylNR^mR^m$  or  $-NR^mC_{2-6}alkylOR^m$ ; and

15 Y is O or NH.

82. A compound according to Claim 81, wherein:

$R^4$  is a saturated or unsaturated 5- or 6-membered ring containing 0, 1, 2 or 3 atoms selected from O, N and S that is vicinally fused with a saturated or  
 20 unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected from O, N and S with the remaining atoms being carbon, so long as the combination of O and S atoms is not greater than 2, wherein the ring and bridge are substituted by 0, 1, 2 or 3 substituents independently selected from  $C_{1-8}alkyl$ ,  $C_{1-4}haloalkyl$ , halo, cyano, nitro,  $-C(=O)R^n$ ,  $-C(=O)OR^n$ ,  $-C(=O)NR^mR^m$ ,  $-C(=NR^m)NR^mR^m$ ,  $-OR^m$ ,  
 25  $-OC(=O)R^n$ ,  $-OC(=O)NR^mR^m$ ,  $-OC(=O)N(R^m)S(=O)_2R^n$ ,  $-OC_{2-6}alkylNR^mR^m$ ,  
 $-OC_{2-6}alkylOR^m$ ,  $-SR^m$ ,  $-S(=O)R^n$ ,  $-S(=O)_2R^n$ ,  $-S(=O)_2NR^mR^m$ ,  
 $-S(=O)_2N(R^m)C(=O)R^n$ ,  $-S(=O)_2N(R^m)C(=O)OR^n$ ,  $-S(=O)_2N(R^m)C(=O)NR^mR^m$ ,  
 $-NR^mR^m$ ,  $-N(R^m)C(=O)R^n$ ,  $-N(R^m)C(=O)OR^n$ ,  $-N(R^m)C(=O)NR^mR^m$ ,  
 $-N(R^m)C(=NR^m)NR^mR^m$ ,  $-N(R^m)S(=O)_2R^n$ ,  $-N(R^m)S(=O)_2NR^mR^m$ ,  
 30  $-NR^mC_{2-6}alkylNR^mR^m$ ,  $-NR^mC_{2-6}alkylOR^m$ ,  $-C(=O)R^s$ ,  $-C(=O)OR^s$ ,  
 $-C(=O)NR^mR^s$ ,  $-C(=NR^m)NR^mR^s$ ,  $-OR^s$ ,  $-OC(=O)R^s$ ,  $-OC(=O)NR^mR^s$ ,  
 $-OC(=O)N(R^m)S(=O)_2R^s$ ,  $-OC_{2-6}alkylNR^mR^s$ ,  $-OC_{2-6}alkylOR^s$ ,  $-SR^s$ ,  $-S(=O)R^s$ ,

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- S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>,
- N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>,
- N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and C<sub>1-4</sub>alkyl
- 5 substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro,
- C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>,
- OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>,
- SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>,
- 10 -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,
- OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>,
- OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- 15 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; and the ring and bridge carbon atoms are substituted with 0, 1 or 2 =O groups.

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83. A compound according to Claim 81, wherein R<sup>4</sup> is a phenyl ring that is vicinally fused with a saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected from O, N and S with the remaining atoms being carbon, so long as the combination of O and S atoms is not greater than 2,

25 wherein the ring and bridge are substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>,

-OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>,

-SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>,

30 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>,

-N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,

-N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,

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- NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>,
- C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>,
- OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>,
- S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>,
- 5 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>,
- N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>,
- N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro,
- C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>,
- 10 -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>,
- SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>,
- N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- 15 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,
- OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>,
- OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- 20 -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; and the bridge carbon atoms are substituted with 0, 1 or 2 =O groups.

84. A compound according to Claim 81, wherein R<sup>7</sup> is C<sub>1-9</sub>alkyl,  
 25 C<sub>1-4</sub>haloalkyl, halo, -OC<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>R<sup>m</sup> or  
 -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl.

85. A compound according to Claim 81, wherein R<sup>7</sup> is C<sub>1-5</sub>alkyl,  
 C<sub>1-4</sub>haloalkyl, I, Br or Cl.

30 86. A compound according to Claim 81, wherein R<sup>7</sup> is tert-butyl or  
 trifluoromethyl.

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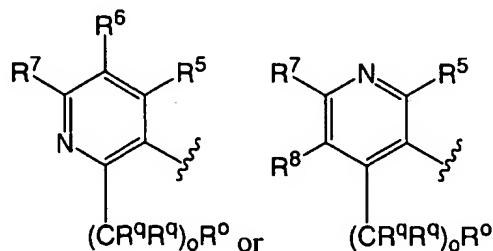
87. A compound according to Claim 81, wherein R<sup>o</sup> is a saturated, partially-saturated or unsaturated 5-, 6- or 7-membered monocyclic ring containing 0, 1, 2 or 3 atoms selected from N, O and S, so long as the combination of O and S atoms is not greater than 1, wherein the carbon atoms of the ring are substituted by 0, 1 or 2 oxo groups, wherein the ring is substituted by 0, 1, 2 or 3 substituents independently selected from R<sup>p</sup>.

88. A compound according to Claim 81, wherein R<sup>o</sup> is a saturated,  
10 partially-saturated or unsaturated 6-membered ring containing 0, 1, 2 or 3 N  
atoms, wherein the carbon atoms of the ring are substituted by 0, 1 or 2 oxo  
groups, wherein the ring is substituted by 0, 1, 2 or 3 substituents independently  
selected from R<sup>p</sup>.

15 89. A compound according to Claim 81, wherein Y is O.

90. A compound according to Claim 81, wherein Y is NH.

91. A compound according to Claim 80, wherein:  
R<sup>1</sup> is



$R^2$  is H, -OR<sup>m</sup>, halo, C<sub>1-3</sub>haloalkyl or C<sub>1-6</sub>alkyl;

$R^4$  is a saturated or unsaturated 5- or 6-membered ring containing 0, 1, 2 or 3 atoms selected from O, N and S that is optionally vicinally fused with a  
25 saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected from O, N and S with the remaining atoms being carbon, so long as the combination of O and S atoms is not greater than 2, wherein the ring and bridge are substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-8</sub>alkyl.

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$C_{1-4}$ haloalkyl, halo, cyano, nitro,  $-C(=O)R^n$ ,  $-C(=O)OR^n$ ,  $-C(=O)NR^mR^m$ ,  
 $-C(=NR^m)NR^mR^m$ ,  $-OR^m$ ,  $-OC(=O)R^n$ ,  $-OC(=O)NR^mR^m$ ,  
 $-OC(=O)N(R^m)S(=O)_2R^n$ ,  $-OC_{2-6}$ alkyl $NR^mR^m$ ,  $-OC_{2-6}$ alkyl $OR^m$ ,  $-SR^m$ ,  $-S(=O)R^n$ ,  
 $-S(=O)_2R^n$ ,  $-S(=O)_2NR^mR^m$ ,  $-S(=O)_2N(R^m)C(=O)R^n$ ,  $-S(=O)_2N(R^m)C(=O)OR^n$ ,  
5  $-S(=O)_2N(R^m)C(=O)NR^mR^m$ ,  $-NR^mR^m$ ,  $-N(R^m)C(=O)R^n$ ,  $-N(R^m)C(=O)OR^n$ ,  
 $-N(R^m)C(=O)NR^mR^m$ ,  $-N(R^m)C(=NR^m)NR^mR^m$ ,  $-N(R^m)S(=O)_2R^n$ ,  
 $-N(R^m)S(=O)_2NR^mR^m$ ,  $-NR^mC_{2-6}$ alkyl $NR^mR^m$ ,  $-NR^mC_{2-6}$ alkyl $OR^m$ ,  $-C(=O)R^s$ ,  
 $-C(=O)OR^s$ ,  $-C(=O)NR^mR^s$ ,  $-C(=NR^m)NR^mR^s$ ,  $-OR^s$ ,  $-OC(=O)R^s$ ,  
 $-OC(=O)NR^mR^s$ ,  $-OC(=O)N(R^m)S(=O)_2R^s$ ,  $-OC_{2-6}$ alkyl $NR^mR^s$ ,  $-OC_{2-6}$ alkyl $OR^s$ ,  
10  $-SR^s$ ,  $-S(=O)R^s$ ,  $-S(=O)_2R^s$ ,  $-S(=O)_2NR^mR^s$ ,  $-S(=O)_2N(R^m)C(=O)R^s$ ,  
 $-S(=O)_2N(R^m)C(=O)OR^s$ ,  $-S(=O)_2N(R^m)C(=O)NR^mR^s$ ,  $-NR^mR^s$ ,  $-N(R^m)C(=O)R^s$ ,  
 $-N(R^m)C(=O)OR^s$ ,  $-N(R^m)C(=O)NR^mR^s$ ,  $-N(R^m)C(=NR^m)NR^mR^s$ ,  
 $-N(R^m)S(=O)_2R^s$ ,  $-N(R^m)S(=O)_2NR^mR^s$ ,  $-NR^mC_{2-6}$ alkyl $NR^mR^s$ ,  $-NR^mC_{2-6}$ alkyl $OR^s$   
and  $C_{1-4}$ alkyl substituted by 1 or 2 groups selected from  $C_{1-2}$ haloalkyl, halo,  
15 cyano, nitro,  $-C(=O)R^n$ ,  $-C(=O)OR^n$ ,  $-C(=O)NR^mR^m$ ,  $-C(=NR^m)NR^mR^m$ ,  $-OR^m$ ,  
 $-OC(=O)R^n$ ,  $-OC(=O)NR^mR^m$ ,  $-OC(=O)N(R^m)S(=O)_2R^n$ ,  $-OC_{2-6}$ alkyl $NR^mR^m$ ,  
 $-OC_{2-6}$ alkyl $OR^m$ ,  $-SR^m$ ,  $-S(=O)R^n$ ,  $-S(=O)_2R^n$ ,  $-S(=O)_2NR^mR^m$ ,  
 $-S(=O)_2N(R^m)C(=O)R^n$ ,  $-S(=O)_2N(R^m)C(=O)OR^n$ ,  $-S(=O)_2N(R^m)C(=O)NR^mR^m$ ,  
 $-NR^mR^m$ ,  $-N(R^m)C(=O)R^n$ ,  $-N(R^m)C(=O)OR^n$ ,  $-N(R^m)C(=O)NR^mR^m$ ,  
20  $-N(R^m)C(=NR^m)NR^mR^m$ ,  $-N(R^m)S(=O)_2R^n$ ,  $-N(R^m)S(=O)_2NR^mR^m$ ,  
 $-NR^mC_{2-6}$ alkyl $NR^mR^m$ ,  $-C(=O)R^s$ ,  $-C(=O)OR^s$ ,  $-C(=O)NR^mR^s$ ,  $-C(=NR^m)NR^mR^s$ ,  
 $-OR^s$ ,  $-OC(=O)R^s$ ,  $-OC(=O)NR^mR^s$ ,  $-OC(=O)N(R^m)S(=O)_2R^s$ ,  $-OC_{2-6}$ alkyl $NR^mR^s$ ,  
 $-OC_{2-6}$ alkyl $OR^s$ ,  $-SR^s$ ,  $-S(=O)R^s$ ,  $-S(=O)_2R^s$ ,  $-S(=O)_2NR^mR^s$ ,  
 $-S(=O)_2N(R^m)C(=O)R^s$ ,  $-S(=O)_2N(R^m)C(=O)OR^s$ ,  $-S(=O)_2N(R^m)C(=O)NR^mR^s$ ,  
25  $-NR^mR^s$ ,  $-N(R^m)C(=O)R^s$ ,  $-N(R^m)C(=O)OR^s$ ,  $-N(R^m)C(=O)NR^mR^s$ ,  
 $-N(R^m)C(=NR^m)NR^mR^s$ ,  $-N(R^m)S(=O)_2R^s$ ,  $-N(R^m)S(=O)_2NR^mR^s$ ,  
 $-NR^mC_{2-6}$ alkyl $NR^mR^s$ ,  $-NR^mC_{2-6}$ alkyl $OR^s$  and  $-NR^mC_{2-6}$ alkyl $OR^m$ ; and the ring  
and bridge carbon atoms are substituted with 0, 1 or 2 =O groups;  
30  $R^7$  is  $C_{1-9}$ alkyl,  $C_{1-4}$ haloalkyl, halo, nitro, cyano,  $-OC_{1-6}$ alkyl,  
 $-O-C_{1-4}$ haloalkyl,  $-O-C_{1-6}$ alkyl $NR^mR^m$ ,  $-O-C_{1-6}$ alkyl $OR^m$ ,  $-NR^mR^m$ ,  
 $-NR^m-C_{1-4}$ haloalkyl,  $-NR^m-C_{1-6}$ alkyl $NR^mR^m$  or  $-NR^m-C_{1-6}$ alkyl $OR^m$ ; [  $C_{1-8}$ alkyl,  
 $C_{1-5}$ haloalkyl, I, Br or Cl]

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$R^o$  is a saturated, partially-saturated or unsaturated 5-, 6- or 7-membered monocyclic or 7-, 8-, 9-, 10- or 11-membered bicyclic ring containing 0, 1, 2, 3 or 4 atoms selected from N, O and S, so long as the combination of O and S atoms is not greater than 2, wherein the carbon atoms of the ring are substituted by 0, 1 or 5 2 oxo groups, wherein the ring is substituted by 0, 1, 2 or 3 substituents independently selected from  $R^p$ ;

$R^p$  is independently at each instance  $C_{1-8}alkyl$ ,  $C_{1-4}haloalkyl$ , halo, cyano, nitro,  $-C(=O)R^n$ ,  $-C(=O)OR^n$ ,  $-C(=O)NR^mR^m$ ,  $-C(=NR^m)NR^mR^m$ ,  $-OR^m$ ,  $-OC(=O)R^n$ ,  $-OC(=O)NR^mR^m$ ,  $-OC(=O)N(R^m)S(=O)R^n$ ,  $-OC_{2-6}alkylNR^mR^m$ ,  $10 -OC_{2-6}alkylOR^m$ ,  $-SR^m$ ,  $-S(=O)R^n$ ,  $-S(=O)R^n$ ,  $-S(=O)NR^mR^m$ ,  $-S(=O)_2N(R^m)C(=O)R^n$ ,  $-S(=O)_2N(R^m)C(=O)OR^n$ ,  $-S(=O)_2N(R^m)C(=O)NR^mR^m$ ,  $-NR^mR^m$ ,  $-N(R^m)C(=O)R^n$ ,  $-N(R^m)C(=O)OR^n$ ,  $-N(R^m)C(=O)NR^mR^m$ ,  $-N(R^m)C(=NR^m)NR^mR^m$ ,  $-N(R^m)S(=O)R^n$ ,  $-N(R^m)S(=O)NR^mR^m$ ,  $-NR^mC_{2-6}alkylNR^mR^m$  or  $-NR^mC_{2-6}alkylOR^m$ ; and  
15  $Y$  is O or NH.

92. A compound according to Claim 91, wherein  $R^4$  is a saturated or unsaturated 5- or 6-membered ring containing 0, 1, 2 or 3 atoms selected from O, N and S that is vicinally fused with a saturated or unsaturated 3- or 4-atom bridge 20 containing 0, 1, 2 or 3 atoms selected from O, N and S with the remaining atoms being carbon, so long as the combination of O and S atoms is not greater than 2, wherein the ring and bridge are substituted by 0, 1, 2 or 3 substituents independently selected from  $C_{1-8}alkyl$ ,  $C_{1-4}haloalkyl$ , halo, cyano, nitro,  $-C(=O)R^n$ ,  $-C(=O)OR^n$ ,  $-C(=O)NR^mR^m$ ,  $-C(=NR^m)NR^mR^m$ ,  $-OR^m$ ,  $-OC(=O)R^n$ ,  $25 -OC(=O)NR^mR^m$ ,  $-OC(=O)N(R^m)S(=O)R^n$ ,  $-OC_{2-6}alkylNR^mR^m$ ,  $-OC_{2-6}alkylOR^m$ ,  $-SR^m$ ,  $-S(=O)R^n$ ,  $-S(=O)R^n$ ,  $-S(=O)NR^mR^m$ ,  $-S(=O)_2N(R^m)C(=O)R^n$ ,  $-S(=O)_2N(R^m)C(=O)OR^n$ ,  $-S(=O)_2N(R^m)C(=O)NR^mR^m$ ,  $-N(R^m)C(=O)R^n$ ,  $-N(R^m)C(=O)OR^n$ ,  $-N(R^m)C(=O)NR^mR^m$ ,  $-N(R^m)C(=NR^m)NR^mR^m$ ,  $-N(R^m)S(=O)R^n$ ,  $-N(R^m)S(=O)NR^mR^m$ ,  $30 -NR^mC_{2-6}alkylNR^mR^m$ ,  $-NR^mC_{2-6}alkylOR^m$ ,  $-C(=O)R^s$ ,  $-C(=O)OR^s$ ,  $-C(=O)NR^mR^s$ ,  $-C(=NR^m)NR^mR^s$ ,  $-OR^s$ ,  $-OC(=O)R^s$ ,  $-OC(=O)NR^mR^s$ ,  $-OC(=O)N(R^m)S(=O)R^s$ ,  $-OC_{2-6}alkylNR^mR^s$ ,  $-OC_{2-6}alkylOR^s$ ,  $-SR^s$ ,  $-S(=O)R^s$ ,

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$\text{-S(=O)}_2\text{R}^s$ ,  $\text{-S(=O)}_2\text{NR}^m\text{R}^s$ ,  $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)R}^s$ ,  $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)OR}^s$ ,  
 $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)NR}^m\text{R}^s$ ,  $\text{-NR}^m\text{R}^s$ ,  $\text{-N(R}^m\text{)C(=O)R}^s$ ,  $\text{-N(R}^m\text{)C(=O)OR}^s$ ,  
 $\text{-N(R}^m\text{)C(=O)NR}^m\text{R}^s$ ,  $\text{-N(R}^m\text{)C(=NR}^m\text{)NR}^m\text{R}^s$ ,  $\text{-N(R}^m\text{)S(=O)}_2\text{R}^s$ ,  
 $\text{-N(R}^m\text{)S(=O)}_2\text{NR}^m\text{R}^s$ ,  $\text{-NR}^m\text{C}_{2-6}\text{alkylNR}^m\text{R}^s$ ,  $\text{-NR}^m\text{C}_{2-6}\text{alkylOR}^s$  and  $\text{C}_{1-4}\text{alkyl}$   
5    substituted by 1 or 2 groups selected from  $\text{C}_{1-2}\text{haloalkyl}$ , halo, cyano, nitro,  
 $\text{-C(=O)R}^n$ ,  $\text{-C(=O)OR}^n$ ,  $\text{-C(=O)NR}^m\text{R}^m$ ,  $\text{-C(=NR}^m\text{)NR}^m\text{R}^m$ ,  $\text{-OR}^m$ ,  $\text{-OC(=O)R}^n$ ,  
 $\text{-OC(=O)NR}^m\text{R}^m$ ,  $\text{-OC(=O)N(R}^m\text{)S(=O)}_2\text{R}^n$ ,  $\text{-OC}_{2-6}\text{alkylNR}^m\text{R}^m$ ,  $\text{-OC}_{2-6}\text{alkylOR}^m$ ,  
 $\text{-SR}^m$ ,  $\text{-S(=O)R}^n$ ,  $\text{-S(=O)}_2\text{R}^n$ ,  $\text{-S(=O)}_2\text{NR}^m\text{R}^m$ ,  $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)R}^n$ ,  
 $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)OR}^n$ ,  $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)NR}^m\text{R}^m$ ,  $\text{-NR}^m\text{R}^m$ ,  
10    $\text{-N(R}^m\text{)C(=O)R}^n$ ,  $\text{-N(R}^m\text{)C(=O)OR}^n$ ,  $\text{-N(R}^m\text{)C(=O)NR}^m\text{R}^m$ ,  
 $\text{-N(R}^m\text{)C(=NR}^m\text{)NR}^m\text{R}^m$ ,  $\text{-N(R}^m\text{)S(=O)}_2\text{R}^n$ ,  $\text{-N(R}^m\text{)S(=O)}_2\text{NR}^m\text{R}^m$ ,  
 $\text{-NR}^m\text{C}_{2-6}\text{alkylNR}^m\text{R}^m$ ,  $\text{-C(=O)R}^s$ ,  $\text{-C(=O)OR}^s$ ,  $\text{-C(=O)NR}^m\text{R}^s$ ,  $\text{-C(=NR}^m\text{)NR}^m\text{R}^s$ ,  
 $\text{-OR}^s$ ,  $\text{-OC(=O)R}^s$ ,  $\text{-OC(=O)NR}^m\text{R}^s$ ,  $\text{-OC(=O)N(R}^m\text{)S(=O)}_2\text{R}^s$ ,  $\text{-OC}_{2-6}\text{alkylNR}^m\text{R}^s$ ,  
 $\text{-OC}_{2-6}\text{alkylOR}^s$ ,  $\text{-SR}^s$ ,  $\text{-S(=O)R}^s$ ,  $\text{-S(=O)}_2\text{R}^s$ ,  $\text{-S(=O)}_2\text{NR}^m\text{R}^s$ ,  
15    $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)R}^s$ ,  $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)OR}^s$ ,  $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)NR}^m\text{R}^s$ ,  
 $\text{-NR}^m\text{R}^s$ ,  $\text{-N(R}^m\text{)C(=O)R}^s$ ,  $\text{-N(R}^m\text{)C(=O)OR}^s$ ,  $\text{-N(R}^m\text{)C(=O)NR}^m\text{R}^s$ ,  
 $\text{-N(R}^m\text{)C(=NR}^m\text{)NR}^m\text{R}^s$ ,  $\text{-N(R}^m\text{)S(=O)}_2\text{R}^s$ ,  $\text{-N(R}^m\text{)S(=O)}_2\text{NR}^m\text{R}^s$ ,  
 $\text{-NR}^m\text{C}_{2-6}\text{alkylNR}^m\text{R}^s$ ,  $\text{-NR}^m\text{C}_{2-6}\text{alkylOR}^s$  and  $\text{-NR}^m\text{C}_{2-6}\text{alkylOR}^m$ ; and the ring  
and bridge carbon atoms are substituted with 0, 1 or 2  $=\text{O}$  groups.  
20

93. A compound according to Claim 91, wherein  $\text{R}^4$  is a phenyl ring  
that is vicinally fused with a saturated or unsaturated 3- or 4-atom bridge  
containing 0, 1, 2 or 3 atoms selected from O, N and S with the remaining atoms  
being carbon, so long as the combination of O and S atoms is not greater than 2,  
25    wherein the ring and bridge are substituted by 0, 1, 2 or 3 substituents  
independently selected from  $\text{C}_{1-8}\text{alkyl}$ ,  $\text{C}_{1-4}\text{haloalkyl}$ , halo, cyano, nitro,  
 $\text{-C(=O)R}^n$ ,  $\text{-C(=O)OR}^n$ ,  $\text{-C(=O)NR}^m\text{R}^m$ ,  $\text{-C(=NR}^m\text{)NR}^m\text{R}^m$ ,  $\text{-OR}^m$ ,  $\text{-OC(=O)R}^n$ ,  
 $\text{-OC(=O)NR}^m\text{R}^m$ ,  $\text{-OC(=O)N(R}^m\text{)S(=O)}_2\text{R}^n$ ,  $\text{-OC}_{2-6}\text{alkylNR}^m\text{R}^m$ ,  $\text{-OC}_{2-6}\text{alkylOR}^m$ ,  
 $\text{-SR}^m$ ,  $\text{-S(=O)R}^n$ ,  $\text{-S(=O)}_2\text{R}^n$ ,  $\text{-S(=O)}_2\text{NR}^m\text{R}^m$ ,  $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)R}^n$ ,  
30    $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)OR}^n$ ,  $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)NR}^m\text{R}^m$ ,  $\text{-NR}^m\text{R}^m$ ,  
 $\text{-N(R}^m\text{)C(=O)R}^n$ ,  $\text{-N(R}^m\text{)C(=O)OR}^n$ ,  $\text{-N(R}^m\text{)C(=O)NR}^m\text{R}^m$ ,  
 $\text{-N(R}^m\text{)C(=NR}^m\text{)NR}^m\text{R}^m$ ,  $\text{-N(R}^m\text{)S(=O)}_2\text{R}^n$ ,  $\text{-N(R}^m\text{)S(=O)}_2\text{NR}^m\text{R}^m$ ,

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- NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>,
- C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>,
- OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>,
- S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>,
- 5 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>,
- N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>,
- N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro,
- C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>,
- 10 -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>,
- SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>,
- N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- 15 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,
- OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>,
- OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- 20 -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; and the bridge carbon atoms are substituted with 0, 1 or 2 =O groups.

94. A compound according to Claim 91, wherein R<sup>7</sup> is C<sub>1-9</sub>alkyl,  
 25 C<sub>1-4</sub>haloalkyl, halo, -OC<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>R<sup>m</sup> or  
 -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl.

95. A compound according to Claim 91, wherein R<sup>7</sup> is C<sub>1-5</sub>alkyl,  
 C<sub>1-4</sub>haloalkyl, I, Br or Cl.

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96. A compound according to Claim 91, wherein R<sup>7</sup> is tert-butyl or  
 trifluoromethyl.

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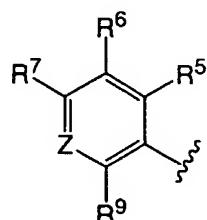
97. A compound according to Claim 91, wherein R<sup>o</sup> is a saturated, partially-saturated or unsaturated 5-, 6- or 7-membered monocyclic ring containing 0, 1, 2 or 3 atoms selected from N, O and S, so long as the combination of O and S atoms is not greater than 1, wherein the carbon atoms of the ring are substituted by 0, 1 or 2 oxo groups, wherein the ring is substituted by 0, 1, 2 or 3 substituents independently selected from R<sup>P</sup>.

98. A compound according to Claim 91, wherein R<sup>o</sup> is a saturated, partially-saturated or unsaturated 6-membered ring containing 0, 1, 2 or 3 N atoms, wherein the carbon atoms of the ring are substituted by 0, 1 or 2 oxo groups, wherein the ring is substituted by 0, 1, 2 or 3 substituents independently selected from R<sup>P</sup>.

99. A compound according to Claim 91, wherein Y is O.

100. A compound according to Claim 91, wherein Y is NH.

101. A compound according to Claim 80, wherein:  
R<sup>1</sup> is



R<sup>2</sup> is H, -OR<sup>m</sup>, halo, C<sub>1-3</sub>haloalkyl or C<sub>1-6</sub>alkyl;

R<sup>4</sup> is a saturated, partially-saturated or unsaturated 8-, 9-, 10 or 11-membered bicyclic heterocycle containing 1, 2, 3, 4 or 5 atoms selected from O, N and S, so long as the combination of O and S atoms is not greater than 2, but excluding quinolin-6-yl, 4,5,6,7-tetrahydro-benzo[b]thiophen-2-yl, benzothiazol-2-yl, 2,3-dihydro-benzo[1,4]dioxin-6-yl, wherein the heterocycle is substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-9</sub>alkyl, oxo, C<sub>1-4</sub>haloalkyl,

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halo, nitro, cyano, -OR<sup>m</sup>, -S(=O)<sub>n</sub>C<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>,  
 -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>,  
 -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>, -C(=O)C<sub>1-6</sub>alkyl, -OC(=O)C<sub>1-6</sub>alkyl, -C(=O)NR<sup>m</sup>C<sub>1-6</sub>alkyl,  
 -NR<sup>m</sup>C(=O)C<sub>1-6</sub>alkyl -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,  
 5 -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>,  
 -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,  
 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,  
 -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,  
 -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,  
 10 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and C<sub>1-4</sub>alkyl substituted by 1 or 2  
 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>,  
 -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>,  
 -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>,  
 -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>,  
 15 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>,  
 -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>,  
 -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,  
 -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>,  
 -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,  
 20 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,  
 -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,  
 -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,  
 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; wherein R<sup>4</sup> is  
 not 2-aminocarbonylmethyl-2,3-dihydro-benzo[1,4]dioxin-8-yl, 2-cyanomethyl-  
 25 2,3-dihydro-benzo[1,4]dioxin-8-yl, quinolin-3-yl, 3H-quinazolin-4-on-3-yl,  
 benzo[1,3]dioxol-5-yl, 3,3-dimethyl-1,3-dihydro-indol-2-on-6-yl or 4,4-dimethyl-  
 3,4-dihydro-1H-quinolin-2-on-7-yl;  
 R<sup>7</sup> is C<sub>1-8</sub>alkyl, C<sub>1-5</sub>haloalkyl, I or Br;  
 R<sup>9</sup> is H, C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OC<sub>1-6</sub>alkyl,  
 30 -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>,  
 -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>;  
 Y is NH; and

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Z is CR<sup>8</sup> or N.

201. A compound according to Claim 101, wherein R<sup>4</sup> is a heterocycle selected from indole, 3H-indole, benzo[b]furan, benzothiophene, 1H-indazole, 5 benzimidazole, benzthiazole, 1H-benzotriazole, 7-quinoline, 8-quinoline, 1,2,3,4-tetrahydroquinoline, isoquinoline, cinnoline, phthalazine, quinazoline and quinoxaline, wherein the heterocycle is substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-9</sub>alkyl, oxo, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OR<sup>m</sup>, -S(=O)<sub>n</sub>C<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, 10 -NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>, -C(=O)C<sub>1-6</sub>alkyl, -OC(=O)C<sub>1-6</sub>alkyl, -C(=O)NR<sup>m</sup>C<sub>1-6</sub>alkyl, -NR<sup>m</sup>C(=O)C<sub>1-6</sub>alkyl -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)NR<sup>m</sup>R<sup>s</sup>, -S(=O)N(R<sup>m</sup>)C(=O)R<sup>s</sup>, 15 -S(=O)N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, 20 -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)R<sup>n</sup>, -S(=O)NR<sup>m</sup>R<sup>m</sup>, -S(=O)N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, 25 -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)NR<sup>m</sup>R<sup>s</sup>, -S(=O)N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)NR<sup>m</sup>R<sup>s</sup>, 30 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>.

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103. A compound according to Claim 101, wherein R<sup>4</sup> is a heterocycle selected from 6-indole, 7-indole, 6-3H-indole, 7-3H-indole, 6-benzo[b]furan, 7-benzo[b]furan, 6-benzothiophene, 7-benzothiophene, 6-1H-indazole, 7-1H-indazole, benzimidazole, benzthiazole, 1H-benzotriazole, 7-quinoline, 8-quinoline, 7-1,2,3,4-tetrahydroquinoline, 8-1,2,3,4-tetrahydroquinoline, isoquinolin-7-yl, isoquinolin-8-yl, 7-cinnoline, 8-cinnoline, phthalazine, 7-quinazoline, 8-quinazoline and quinoxaline, wherein the heterocycle is substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-9</sub>alkyl, oxo, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OR<sup>m</sup>, -S(=O)<sub>n</sub>C<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, 5 -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>, -C(=O)C<sub>1-6</sub>alkyl, -OC(=O)C<sub>1-6</sub>alkyl, -C(=O)NR<sup>m</sup>C<sub>1-6</sub>alkyl, -NR<sup>m</sup>C(=O)C<sub>1-6</sub>alkyl -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, 10 -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro, 15 -C(=O)R<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, 20 -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, 25 -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, 30 -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>.

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104. A compound according to Claim 101, wherein R<sup>9</sup> is C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OC<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>.

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105. A compound according to Claim 101, wherein R<sup>9</sup> is H.

106. A compound according to Claim 101, wherein Z is CR<sup>8</sup>.

10

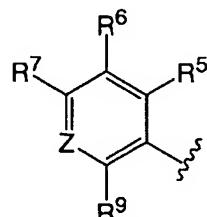
107. A compound according to Claim 101, wherein Z is N.

108. A compound according to Claim 101, wherein R<sup>7</sup> is tert-butyl or trifluoromethyl.

15

109. A compound according to Claim 80, wherein:

R<sup>1</sup> is

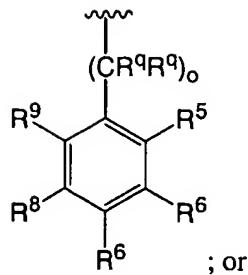


R<sup>2</sup> is C<sub>1-6</sub>alkyl substituted by 1, 2 or 3 substituents selected from

20 C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, 25 -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; or

R<sup>2</sup> is

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; or

$R^2$  is a saturated or unsaturated 5- or 6-membered ring heterocycle

containing 1, 2 or 3 heteroatoms independently selected from N, O and S, wherein no more than 2 of the ring members are O or S, wherein the heterocycle is

5 optionally fused with a phenyl ring, and the heterocycle or fused phenyl ring is substituted by 0, 1, 2 or 3 substituents independently selected from  $R^5$ ,  $R^6$  and  $R^7$ ;

$R^4$  is a saturated or unsaturated 5- or 6-membered ring containing 0, 1, 2 or 3 atoms selected from O, N and S that is optionally vicinally fused with a saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected

10 from O, N and S with the remaining atoms being carbon, so long as the combination of O and S atoms is not greater than 2, wherein the ring and bridge are substituted by 0, 1, 2 or 3 substituents independently selected from  $C_{1-8}$ alkyl,  $C_{1-4}$ haloalkyl, halo, cyano, nitro,  $-C(=O)R^n$ ,  $-C(=O)OR^n$ ,  $-C(=O)NR^mR^m$ ,  $-C(=NR^m)NR^mR^m$ ,  $-OR^m$ ,  $-OC(=O)R^n$ ,  $-OC(=O)NR^mR^m$ ,

15  $-OC(=O)N(R^m)S(=O)R^n$ ,  $-OC_{2-6}$ alkyl $NR^mR^m$ ,  $-OC_{2-6}$ alkyl $OR^m$ ,  $-SR^m$ ,  $-S(=O)R^n$ ,  $-S(=O)_2R^n$ ,  $-S(=O)_2NR^mR^m$ ,  $-S(=O)_2N(R^m)C(=O)R^n$ ,  $-S(=O)_2N(R^m)C(=O)OR^n$ ,  $-S(=O)_2N(R^m)C(=O)NR^mR^m$ ,  $-NR^mR^m$ ,  $-N(R^m)C(=O)R^n$ ,  $-N(R^m)C(=O)OR^n$ ,  $-N(R^m)C(=O)NR^mR^m$ ,  $-N(R^m)C(=NR^m)NR^mR^m$ ,  $-N(R^m)S(=O)_2R^n$ ,

20  $-N(R^m)S(=O)_2NR^mR^m$ ,  $-NR^mC_{2-6}$ alkyl $NR^mR^m$ ,  $-NR^mC_{2-6}$ alkyl $OR^m$ ,  $-C(=O)R^s$ ,  $-C(=O)OR^s$ ,  $-C(=O)NR^mR^s$ ,  $-C(=NR^m)NR^mR^s$ ,  $-OR^s$ ,  $-OC(=O)R^s$ ,  $-OC(=O)N(R^m)S(=O)_2R^s$ ,  $-OC_{2-6}$ alkyl $NR^mR^s$ ,  $-OC_{2-6}$ alkyl $OR^s$ ,  $-SR^s$ ,  $-S(=O)R^s$ ,  $-S(=O)_2R^s$ ,  $-S(=O)_2NR^mR^s$ ,  $-S(=O)_2N(R^m)C(=O)R^s$ ,  $-S(=O)_2N(R^m)C(=O)OR^s$ ,  $-S(=O)_2N(R^m)C(=O)NR^mR^s$ ,  $-NR^mR^s$ ,  $-N(R^m)C(=O)R^s$ ,  $-N(R^m)C(=O)OR^s$ ,  $-N(R^m)C(=O)NR^mR^s$ ,  $-N(R^m)C(=NR^m)NR^mR^s$ ,

25  $-N(R^m)S(=O)_2R^s$ ,  $-N(R^m)S(=O)_2NR^mR^s$ ,  $-NR^mC_{2-6}$ alkyl $NR^mR^s$ ,  $-NR^mC_{2-6}$ alkyl $OR^s$  and  $C_{1-4}$ alkyl substituted by 1 or 2 groups selected from  $C_{1-2}$ haloalkyl, halo, cyano, nitro,  $-C(=O)R^n$ ,  $-C(=O)OR^n$ ,  $-C(=O)NR^mR^m$ ,  $-C(=NR^m)NR^mR^m$ ,  $-OR^m$ ,

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- OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>,
- OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- 5 -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,
- OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>,
- OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- 10 -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, and the ring and bridge carbon atoms are substituted with 0, 1 or 2 =O groups;

R<sup>7</sup> is C<sub>2-8</sub>alkyl, C<sub>1-5</sub>haloalkyl, I, Br;

- 15 R<sup>9</sup> is independently, at each instance, H, C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OC<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>,
- O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>;

Y is NH; and

- 20 Z is CR<sup>8</sup> or N.

- 110. A compound according to Claim 109, wherein R<sup>2</sup> is C<sub>1-6</sub>alkyl substituted by 1, 2 or 3 substituents selected from C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>,
- 25 -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>,
- OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- 30 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>;

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111. A compound according to Claim 109, wherein R<sup>2</sup> is  
 -(C(R<sup>9</sup>)<sub>2</sub>)<sub>0</sub>phenyl, wherein the phenyl is substituted by 0, 1, 2 or 3 substituents  
 independently selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro,  
 -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>,  
 5 -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>,  
 -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)NR<sup>m</sup>R<sup>m</sup>, -S(=O)N(R<sup>m</sup>)C(=O)R<sup>n</sup>,  
 -S(=O)N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>,  
 -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,  
 -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)NR<sup>m</sup>R<sup>m</sup>,  
 10 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>,  
 -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>,  
 -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>,  
 -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)NR<sup>m</sup>R<sup>s</sup>, -S(=O)N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)N(R<sup>m</sup>)C(=O)OR<sup>s</sup>,  
 -S(=O)N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>,  
 15 -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>,  
 -N(R<sup>m</sup>)S(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and C<sub>1-4</sub>alkyl  
 substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro,  
 -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>,  
 -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>,  
 20 -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)NR<sup>m</sup>R<sup>m</sup>, -S(=O)N(R<sup>m</sup>)C(=O)R<sup>n</sup>,  
 -S(=O)N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>,  
 -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,  
 -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)NR<sup>m</sup>R<sup>m</sup>,  
 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,  
 25 -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>,  
 -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)NR<sup>m</sup>R<sup>s</sup>,  
 -S(=O)N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,  
 -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,  
 -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)NR<sup>m</sup>R<sup>s</sup>,  
 30 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>.

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112. A compound according to Claim 109, wherein R<sup>2</sup> is -(C(R<sup>9</sup>)<sub>2</sub>)<sub>0</sub>R<sup>r</sup>,  
 wherein R<sup>r</sup> is a saturated or unsaturated 5- or 6-membered ring heterocycle  
 containing 1, 2 or 3 heteroatoms independently selected from N, O and S, wherein  
 no more than 2 of the ring members are O or S, wherein the heterocycle is  
 5     optionally fused with a phenyl ring, and the heterocycle or fused phenyl ring is  
 substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>,  
 -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>,  
 -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>,  
 10    -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>,  
 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>,  
 -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)R<sup>n</sup>,  
 -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>,  
 -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>,  
 15    -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>,  
 -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>,  
 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>,  
 -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,  
 -N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup>  
 20    and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo,  
 cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>,  
 -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>,  
 -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,  
 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,  
 25    -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,  
 -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,  
 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,  
 -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>,  
 -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,  
 30    -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,  
 -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,

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-N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)NR<sup>m</sup>R<sup>s</sup>,  
 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>;

113. A compound according to Claim 109, wherein R<sup>4</sup> is a phenyl ring  
 5 that is vicinally fused with a saturated or unsaturated 3- or 4-atom bridge  
 containing 0, 1, 2 or 3 atoms selected from O, N and S with the remaining atoms  
 being carbon, so long as the combination of O and S atoms is not greater than 2,  
 wherein the ring and bridge are substituted by 0, 1, 2 or 3 substituents  
 independently selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro,  
 10 -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>,  
 -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>,  
 -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)NR<sup>m</sup>R<sup>m</sup>, -S(=O)N(R<sup>m</sup>)C(=O)R<sup>n</sup>,  
 -S(=O)N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>,  
 -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,  
 15 -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)NR<sup>m</sup>R<sup>m</sup>,  
 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>,  
 -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>,  
 -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>,  
 -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)NR<sup>m</sup>R<sup>s</sup>, -S(=O)N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)N(R<sup>m</sup>)C(=O)OR<sup>s</sup>,  
 20 -S(=O)N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>,  
 -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>,  
 -N(R<sup>m</sup>)S(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and C<sub>1-4</sub>alkyl  
 substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro,  
 -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>,  
 25 -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>,  
 -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)NR<sup>m</sup>R<sup>m</sup>, -S(=O)N(R<sup>m</sup>)C(=O)R<sup>n</sup>,  
 -S(=O)N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>,  
 -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,  
 -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)NR<sup>m</sup>R<sup>m</sup>,  
 30 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; and the bridge carbon atoms are  
 substituted with 0, 1 or 2 =O groups.

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114. A compound according to Claim 109, wherein R<sup>7</sup> is tert-butyl or trifluoromethyl.

115. A compound according to Claim 109, wherein R<sup>9</sup> is H.

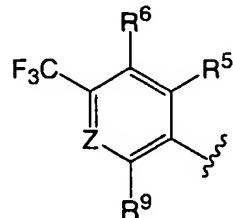
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116. A compound according to Claim 109, wherein Z is CR<sup>8</sup>.

117. A compound according to Claim 109, wherein Z is N.

10 118. A compound according to Claim 80, wherein:

R<sup>1</sup> is



R<sup>2</sup> is H, -OR<sup>m</sup>, Cl, C<sub>1-3</sub>haloalkyl or C<sub>1-6</sub>alkyl;

R<sup>4</sup> is a saturated or unsaturated 5- or 6-membered ring containing 0, 1, 2 or

15 3 atoms selected from O, N and S, so long as the combination of O and S atoms is not greater than 2, wherein the ring is substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>n</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>,

20 -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,

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-N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup>  
and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo,  
cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>,  
-OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>,

5 -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>,  
-S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>,  
-N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,  
-N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,  
-NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; wherein R<sup>4</sup> is not unsubstituted  
10 phenyl;

R<sup>9</sup> is independently, at each instance, H, C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo,  
nitro, cyano, -OC<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>,  
-O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or  
-NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>;

15 Y is NH; and  
Z is CR<sup>8</sup> or N.

119. A compound according to Claim 118, wherein R<sup>4</sup> is a saturated or  
unsaturated 5- or 6-membered ring containing 1, 2 or 3 atoms selected from O, N  
20 and S, so long as the combination of O and S atoms is not greater than 1, wherein  
the ring is substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>n</sup>,  
-OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>,  
-S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>,  
25 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>,  
-N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,  
-N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,  
-NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>,  
-C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>,  
30 -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>,  
-S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>,  
-S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>,

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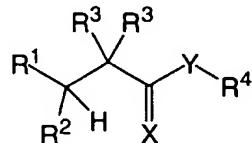
- N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>,
- N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro,
- C(=O)R<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>,
- 5 -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>,
- SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>,
- N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- 10 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>;

120. A compound according to Claim 118, wherein Z is CR<sup>8</sup>.

121. A compound according to Claim 118, wherein Z is N.

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122. A compound having the structure:



wherein:

- X is O, S or NR<sup>m</sup>;
- 20 n is independently, at each instance, 0, 1 or 2;
- o is independently, at each instance, 0, 1, 2 or 3;
- R<sup>m</sup> is independently at each instance H or R<sup>n</sup>;
- R<sup>n</sup> is independently at each instance C<sub>1-8</sub>alkyl, phenyl or benzyl;
- R<sup>q</sup> is independently in each instance H, C<sub>1-4</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>,
- 25 -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>,
- OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,

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-N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,  
-NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>;

R<sup>s</sup> is R<sup>n</sup> substituted by 0, 1, 2 or 3 substituents independently selected from R<sup>q</sup>;

5 R<sup>3</sup> is H or C<sub>1-4</sub>alkyl;

R<sup>5</sup> is H, C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OC<sub>1-6</sub>alkyl,  
-O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>,  
-NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>, or -(CH<sub>2</sub>)<sub>n</sub>R<sup>c</sup>

R<sup>6</sup> is, independently at each instance, H, C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo,

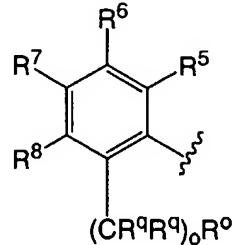
10 nitro, cyano, -OC<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>,

-O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or  
-NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>;

R<sup>8</sup> is H, C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OC<sub>1-6</sub>alkyl,  
-O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>,

15 -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>; and

(A) R<sup>1</sup> is



R<sup>2</sup> is H, -OR<sup>m</sup>, halo, C<sub>1-3</sub>haloalkyl or C<sub>1-6</sub>alkyl;

R<sup>4</sup> is a saturated or unsaturated 5- or 6-membered ring containing 0, 1, 2 or 20 3 atoms selected from O, N and S that is optionally vicinally fused with a saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected from O, N and S with the remaining atoms being carbon, so long as the combination of O and S atoms is not greater than 2, wherein the ring and bridge are substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>,

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- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>,
- N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>,
- N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>,
- C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>,
- 5 -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>,
- SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>,
- N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,
- N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup>
- 10 and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>,
- OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>,
- OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- 15 -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,
- OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>,
- OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- 20 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; and the ring and bridge carbon atoms are substituted with 0, 1 or 2 =O groups;
- 25 R<sup>7</sup> is C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OC<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>,
- NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>;

R<sup>9</sup> is a saturated, partially-saturated or unsaturated 5-, 6- or 7-membered monocyclic or 7-, 8-, 9-, 10- or 11-membered bicyclic ring containing 0, 1, 2, 3 or

30 4 atoms selected from N, O and S, so long as the combination of O and S atoms is not greater than 2, wherein the carbon atoms of the ring are substituted by 0, 1 or

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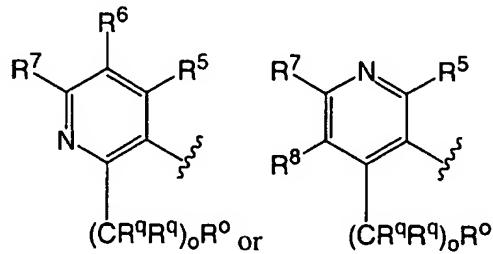
2 oxo groups, wherein the ring is substituted by 0, 1, 2 or 3 substituents independently selected from R<sup>p</sup>;

R<sup>p</sup> is independently at each instance C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)NR<sup>m</sup>R<sup>m</sup>,

10 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; and

Y is O or NH; or

(B) R<sup>1</sup> is



R<sup>2</sup> is H, -OR<sup>m</sup>, halo, C<sub>1-3</sub>haloalkyl or C<sub>1-6</sub>alkyl;

15 R<sup>4</sup> is a saturated or unsaturated 5- or 6-membered ring containing 0, 1, 2 or 3 atoms selected from O, N and S that is optionally vicinally fused with a saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected from O, N and S with the remaining atoms being carbon, so long as the combination of O and S atoms is not greater than 2, wherein the ring and bridge are substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>,

20 -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>,

25 -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>,

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$\text{-OC(=O)NR}^m\text{R}^s$ ,  $\text{-OC(=O)N(R}^m\text{)S(=O)}_2\text{R}^s$ ,  $\text{-OC}_{2-6}\text{alkylNR}^m\text{R}^s$ ,  $\text{-OC}_{2-6}\text{alkylOR}^s$ ,  
 $\text{-SR}^s$ ,  $\text{-S(=O)R}^s$ ,  $\text{-S(=O)}_2\text{R}^s$ ,  $\text{-S(=O)}_2\text{NR}^m\text{R}^s$ ,  $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)R}^s$ ,  
 $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)OR}^s$ ,  $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)NR}^m\text{R}^s$ ,  $\text{-NR}^m\text{R}^s$ ,  $\text{-N(R}^m\text{)C(=O)R}^s$ ,  
 $\text{-N(R}^m\text{)C(=O)OR}^s$ ,  $\text{-N(R}^m\text{)C(=O)NR}^m\text{R}^s$ ,  $\text{-N(R}^m\text{)C(=NR}^m\text{)NR}^m\text{R}^s$ ,  
5  $\text{-N(R}^m\text{)S(=O)}_2\text{R}^s$ ,  $\text{-N(R}^m\text{)S(=O)}_2\text{NR}^m\text{R}^s$ ,  $\text{-NR}^m\text{C}_{2-6}\text{alkylNR}^m\text{R}^s$ ,  $\text{-NR}^m\text{C}_{2-6}\text{alkylOR}^s$   
and  $\text{C}_{1-4}\text{alkyl}$  substituted by 1 or 2 groups selected from  $\text{C}_{1-2}\text{haloalkyl}$ , halo,  
cyano, nitro,  $\text{-C(=O)R}^n$ ,  $\text{-C(=O)OR}^n$ ,  $\text{-C(=O)NR}^m\text{R}^m$ ,  $\text{-C(=NR}^m\text{)NR}^m\text{R}^m$ ,  $\text{-OR}^m$ ,  
 $\text{-OC(=O)R}^n$ ,  $\text{-OC(=O)NR}^m\text{R}^m$ ,  $\text{-OC(=O)N(R}^m\text{)S(=O)}_2\text{R}^n$ ,  $\text{-OC}_{2-6}\text{alkylNR}^m\text{R}^m$ ,  
 $\text{-OC}_{2-6}\text{alkylOR}^m$ ,  $\text{-SR}^m$ ,  $\text{-S(=O)R}^n$ ,  $\text{-S(=O)}_2\text{R}^n$ ,  $\text{-S(=O)}_2\text{NR}^m\text{R}^m$ ,  
10  $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)R}^n$ ,  $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)OR}^n$ ,  $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)NR}^m\text{R}^m$ ,  
 $\text{-NR}^m\text{R}^m$ ,  $\text{-N(R}^m\text{)C(=O)R}^n$ ,  $\text{-N(R}^m\text{)C(=O)OR}^n$ ,  $\text{-N(R}^m\text{)C(=O)NR}^m\text{R}^m$ ,  
 $\text{-N(R}^m\text{)C(=NR}^m\text{)NR}^m\text{R}^m$ ,  $\text{-N(R}^m\text{)S(=O)}_2\text{R}^n$ ,  $\text{-N(R}^m\text{)S(=O)}_2\text{NR}^m\text{R}^m$ ,  
 $\text{-NR}^m\text{C}_{2-6}\text{alkylNR}^m\text{R}^m$ ,  $\text{-C(=O)R}^s$ ,  $\text{-C(=O)OR}^s$ ,  $\text{-C(=O)NR}^m\text{R}^s$ ,  $\text{-C(=NR}^m\text{)NR}^m\text{R}^s$ ,  
 $\text{-OR}^s$ ,  $\text{-OC(=O)R}^s$ ,  $\text{-OC(=O)NR}^m\text{R}^s$ ,  $\text{-OC(=O)N(R}^m\text{)S(=O)}_2\text{R}^s$ ,  $\text{-OC}_{2-6}\text{alkylNR}^m\text{R}^s$ ,  
15  $\text{-OC}_{2-6}\text{alkylOR}^s$ ,  $\text{-SR}^s$ ,  $\text{-S(=O)R}^s$ ,  $\text{-S(=O)}_2\text{R}^s$ ,  $\text{-S(=O)}_2\text{NR}^m\text{R}^s$ ,  
 $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)R}^s$ ,  $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)OR}^s$ ,  $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)NR}^m\text{R}^s$ ,  
 $\text{-NR}^m\text{R}^s$ ,  $\text{-N(R}^m\text{)C(=O)R}^s$ ,  $\text{-N(R}^m\text{)C(=O)OR}^s$ ,  $\text{-N(R}^m\text{)C(=O)NR}^m\text{R}^s$ ,  
 $\text{-N(R}^m\text{)C(=NR}^m\text{)NR}^m\text{R}^s$ ,  $\text{-N(R}^m\text{)S(=O)}_2\text{R}^s$ ,  $\text{-N(R}^m\text{)S(=O)}_2\text{NR}^m\text{R}^s$ ,  
 $\text{-NR}^m\text{C}_{2-6}\text{alkylNR}^m\text{R}^s$ ,  $\text{-NR}^m\text{C}_{2-6}\text{alkylOR}^s$  and  $\text{-NR}^m\text{C}_{2-6}\text{alkylOR}^m$ ; and the ring  
20 and bridge carbon atoms are substituted with 0, 1 or 2  $=\text{O}$  groups;

$\text{R}^7$  is  $\text{C}_{1-9}\text{alkyl}$ ,  $\text{C}_{1-4}\text{haloalkyl}$ , halo, nitro, cyano,  $\text{-OC}_{1-6}\text{alkyl}$ ,  
 $\text{-O-C}_{1-4}\text{haloalkyl}$ ,  $\text{-O-C}_{1-6}\text{alkylNR}^m\text{R}^m$ ,  $\text{-O-C}_{1-6}\text{alkylOR}^m$ ,  $\text{-NR}^m\text{R}^m$ ,  
 $\text{-NR}^m\text{-C}_{1-4}\text{haloalkyl}$ ,  $\text{-NR}^m\text{-C}_{1-6}\text{alkylNR}^m\text{R}^m$  or  $\text{-NR}^m\text{-C}_{1-6}\text{alkylOR}^m$ ;

$\text{R}^9$  is a saturated, partially-saturated or unsaturated 5-, 6- or 7-membered  
25 monocyclic or 7-, 8-, 9-, 10- or 11-membered bicyclic ring containing 0, 1, 2, 3 or  
4 atoms selected from N, O and S, so long as the combination of O and S atoms is  
not greater than 2, wherein the carbon atoms of the ring are substituted by 0, 1 or  
2 oxo groups, wherein the ring is substituted by 0, 1, 2 or 3 substituents  
independently selected from  $\text{R}^p$ ;

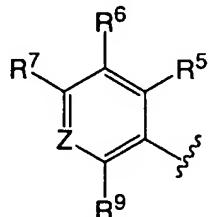
30  $\text{R}^p$  is independently at each instance  $\text{C}_{1-8}\text{alkyl}$ ,  $\text{C}_{1-4}\text{haloalkyl}$ , halo, cyano,  
nitro,  $\text{-C(=O)R}^n$ ,  $\text{-C(=O)OR}^n$ ,  $\text{-C(=O)NR}^m\text{R}^m$ ,  $\text{-C(=NR}^m\text{)NR}^m\text{R}^m$ ,  $\text{-OR}^m$ ,  
 $\text{-OC(=O)R}^n$ ,  $\text{-OC(=O)NR}^m\text{R}^m$ ,  $\text{-OC(=O)N(R}^m\text{)S(=O)}_2\text{R}^n$ ,  $\text{-OC}_{2-6}\text{alkylNR}^m\text{R}^m$ ,

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- OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- 5 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; and

Y is O or NH; or

(C) R<sup>1</sup> is



R<sup>2</sup> is H, -OR<sup>m</sup>, halo, C<sub>1-3</sub>haloalkyl or C<sub>1-6</sub>alkyl;

- 10 R<sup>4</sup> is a saturated, partially-saturated or unsaturated 8-, 9-, 10 or 11-membered bicyclic heterocycle containing 1, 2, 3, 4 or 5 atoms selected from O, N and S, so long as the combination of O and S atoms is not greater than 2, but excluding quinolin-6-yl, 4,5,6,7-tetrahydro-benzo[b]thiophen-2-yl, benzothiazol-2-yl, 2,3-dihydro-benzo[1,4]dioxin-6-yl, wherein the heterocycle is substituted by
- 15 0, 1, 2 or 3 substituents independently selected from C<sub>1-9</sub>alkyl, oxo, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OR<sup>m</sup>, -S(=O)<sub>n</sub>C<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>, -C(=O)C<sub>1-6</sub>alkyl, -OC(=O)C<sub>1-6</sub>alkyl, -C(=O)NR<sup>m</sup>C<sub>1-6</sub>alkyl, -NR<sup>m</sup>C(=O)C<sub>1-6</sub>alkyl -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,
- 20 -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- 25 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>,

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- S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>,
- N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>,
- N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,
- 5 -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>,
- OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- 10 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; wherein R<sup>4</sup> is not 2-aminocarbonylmethyl-2,3-dihydro-benzo[1,4]dioxin-8-yl, 2-cyanomethyl-2,3-dihydro-benzo[1,4]dioxin-8-yl, quinolin-3-yl, 3H-quinazolin-4-on-3-yl, benzo[1,3]dioxol-5-yl, 3,3-dimethyl-1,3-dihydro-indol-2-on-6-yl or 4,4-dimethyl-3,4-dihydro-1H-quinolin-2-on-7-yl;

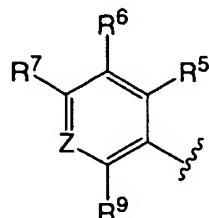
15 R<sup>7</sup> is C<sub>1-8</sub>alkyl, C<sub>1-5</sub>haloalkyl, I or Br

- R<sup>9</sup> is H, C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OC<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl,
- O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl,
- NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>, or -(CH<sub>2</sub>)<sub>n</sub>R<sup>c</sup>;
- R<sup>9</sup> is independently, at each instance, H, C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OC<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>,
- 20 -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>;

Y is NH; and

Z is CR<sup>8</sup> or N; or

25 (D) R<sup>1</sup> is



R<sup>2</sup> is C<sub>1-6</sub>alkyl substituted by 1, 2 or 3 substituents selected from

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$C_{1-4}$ haloalkyl, halo, cyano, nitro,  $-C(=O)R^n$ ,  $-C(=O)OR^m$ ,  $-C(=O)NR^mR^m$ ,  
 $-C(=NR^m)NR^mR^m$ ,  $-OR^m$ ,  $-OC(=O)R^n$ ,  $-OC(=O)NR^mR^m$ ,  
 $-OC(=O)N(R^m)S(=O)_2R^n$ ,  $-OC_{2-6}alkylNR^mR^m$ ,  $-OC_{2-6}alkylOR^m$ ,  $-SR^m$ ,  $-S(=O)R^n$ ,  
 $-S(=O)_2R^n$ ,  $-S(=O)_2NR^mR^m$ ,  $-S(=O)_2N(R^m)C(=O)R^n$ ,  $-S(=O)_2N(R^m)C(=O)OR^n$ ,

5  $-S(=O)_2N(R^m)C(=O)NR^mR^m$ ,  $-NR^mR^m$ ,  $-N(R^m)C(=O)R^n$ ,  $-N(R^m)C(=O)OR^n$ ,  
 $-N(R^m)C(=O)NR^mR^m$ ,  $-N(R^m)C(=NR^m)NR^mR^m$ ,  $-N(R^m)S(=O)_2R^n$ ,  
 $-N(R^m)S(=O)_2NR^mR^m$ ,  $-NR^mC_{2-6}alkylNR^mR^m$  or  $-NR^mC_{2-6}alkylOR^m$ ; or  
 $R^2$  is  $-(C(R^q)_2)_o$ phenyl, wherein the phenyl is substituted by 0, 1, 2 or 3  
 substituents independently selected from  $C_{1-8}$ alkyl,  $C_{1-4}$ haloalkyl, halo, cyano,  
10 nitro,  $-C(=O)R^n$ ,  $-C(=O)OR^m$ ,  $-C(=O)NR^mR^m$ ,  $-C(=NR^m)NR^mR^m$ ,  $-OR^m$ ,  
 $-OC(=O)R^n$ ,  $-OC(=O)NR^mR^m$ ,  $-OC(=O)N(R^m)S(=O)_2R^n$ ,  $-OC_{2-6}alkylNR^mR^m$ ,  
 $-OC_{2-6}alkylOR^m$ ,  $-SR^m$ ,  $-S(=O)R^n$ ,  $-S(=O)_2R^n$ ,  $-S(=O)_2NR^mR^m$ ,  
 $-S(=O)_2N(R^m)C(=O)R^n$ ,  $-S(=O)_2N(R^m)C(=O)OR^n$ ,  $-S(=O)_2N(R^m)C(=O)NR^mR^m$ ,  
 $-NR^mR^m$ ,  $-N(R^m)C(=O)R^n$ ,  $-N(R^m)C(=O)OR^n$ ,  $-N(R^m)C(=O)NR^mR^m$ ,

15  $-N(R^m)C(=NR^m)NR^mR^m$ ,  $-N(R^m)S(=O)_2R^n$ ,  $-N(R^m)S(=O)_2NR^mR^m$ ,  
 $-NR^mC_{2-6}alkylNR^mR^m$ ,  $-NR^mC_{2-6}alkylOR^m$ ,  $-C(=O)R^s$ ,  $-C(=O)OR^s$ ,  
 $-C(=O)NR^mR^s$ ,  $-C(=NR^m)NR^mR^s$ ,  $-OR^s$ ,  $-OC(=O)R^s$ ,  $-OC(=O)NR^mR^s$ ,  
 $-OC(=O)N(R^m)S(=O)_2R^s$ ,  $-OC_{2-6}alkylNR^mR^s$ ,  $-OC_{2-6}alkylOR^s$ ,  $-SR^s$ ,  $-S(=O)R^s$ ,  
 $-S(=O)_2R^s$ ,  $-S(=O)_2NR^mR^s$ ,  $-S(=O)_2N(R^m)C(=O)R^s$ ,  $-S(=O)_2N(R^m)C(=O)OR^s$ ,

20  $-S(=O)_2N(R^m)C(=O)NR^mR^s$ ,  $-NR^mR^s$ ,  $-N(R^m)C(=O)R^s$ ,  $-N(R^m)C(=O)OR^s$ ,  
 $-N(R^m)C(=O)NR^mR^s$ ,  $-N(R^m)C(=NR^m)NR^mR^s$ ,  $-N(R^m)S(=O)_2R^s$ ,  
 $-N(R^m)S(=O)_2NR^mR^s$ ,  $-NR^mC_{2-6}alkylNR^mR^s$ ,  $-NR^mC_{2-6}alkylOR^s$  and  $C_{1-4}$ alkyl  
 substituted by 1 or 2 groups selected from  $C_{1-2}$ haloalkyl, halo, cyano, nitro,  
 $-C(=O)R^n$ ,  $-C(=O)OR^m$ ,  $-C(=O)NR^mR^m$ ,  $-C(=NR^m)NR^mR^m$ ,  $-OR^m$ ,  $-OC(=O)R^n$ ,

25  $-OC(=O)NR^mR^m$ ,  $-OC(=O)N(R^m)S(=O)_2R^n$ ,  $-OC_{2-6}alkylNR^mR^m$ ,  $-OC_{2-6}alkylOR^m$ ,  
 $-SR^m$ ,  $-S(=O)R^n$ ,  $-S(=O)_2R^n$ ,  $-S(=O)_2NR^mR^m$ ,  $-S(=O)_2N(R^m)C(=O)R^n$ ,  
 $-S(=O)_2N(R^m)C(=O)OR^n$ ,  $-S(=O)_2N(R^m)C(=O)NR^mR^m$ ,  $-NR^mR^m$ ,  
 $-N(R^m)C(=O)R^n$ ,  $-N(R^m)C(=O)OR^n$ ,  $-N(R^m)C(=O)NR^mR^m$ ,  
 $-N(R^m)C(=NR^m)NR^mR^m$ ,  $-N(R^m)S(=O)_2R^n$ ,  $-N(R^m)S(=O)_2NR^mR^m$ ,

30  $-NR^mC_{2-6}alkylNR^mR^m$ ,  $-C(=O)R^s$ ,  $-C(=O)OR^s$ ,  $-C(=O)NR^mR^s$ ,  $-C(=NR^m)NR^mR^s$ ,  
 $-OR^s$ ,  $-OC(=O)R^s$ ,  $-OC(=O)NR^mR^s$ ,  $-OC(=O)N(R^m)S(=O)_2R^s$ ,  $-OC_{2-6}alkylNR^mR^s$ ,  
 $-OC_{2-6}alkylOR^s$ ,  $-SR^s$ ,  $-S(=O)R^s$ ,  $-S(=O)_2R^s$ ,  $-S(=O)_2NR^mR^s$ ,

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$\text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)R}^{\text{s}}$ ,  $\text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)OR}^{\text{s}}$ ,  $\text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  
 $\text{-NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $\text{-N(R}^{\text{m}}\text{)C(=O)R}^{\text{s}}$ ,  $\text{-N(R}^{\text{m}}\text{)C(=O)OR}^{\text{s}}$ ,  $\text{-N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  
 $\text{-N(R}^{\text{m}}\text{)C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $\text{-N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{s}}$ ,  $\text{-N(R}^{\text{m}}\text{)S(=O)}_2\text{NR}^{\text{m}}\text{R}^{\text{s}}$ ,  
 $\text{-NR}^{\text{m}}\text{C}_{\text{2-6alkyl}}\text{NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $\text{-NR}^{\text{m}}\text{C}_{\text{2-6alkyl}}\text{OR}^{\text{s}}$  and  $\text{-NR}^{\text{m}}\text{C}_{\text{2-6alkyl}}\text{OR}^{\text{m}}$ ; or  
5         $\text{R}^{\text{2}}$  is  $-(\text{C(R}^{\text{q}}\text{)})_2\text{oR}^{\text{r}}$ , wherein  $\text{R}^{\text{r}}$  is a saturated or unsaturated 5- or  
6-membered ring heterocycle containing 1, 2 or 3 heteroatoms independently  
selected from N, O and S, wherein no more than 2 of the ring members are O or S,  
wherein the heterocycle is optionally fused with a phenyl ring, and the heterocycle  
or fused phenyl ring is substituted by 0, 1, 2 or 3 substituents independently  
10      selected from  $\text{C}_{\text{1-8alkyl}}$ ,  $\text{C}_{\text{1-4haloalkyl}}$ , halo, cyano, nitro,  $-\text{C(=O)R}^{\text{n}}$ ,  $-\text{C(=O)OR}^{\text{n}}$ ,  
 $-\text{C(=O)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $-\text{C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $-\text{OR}^{\text{m}}$ ,  $-\text{OC(=O)R}^{\text{n}}$ ,  $-\text{OC(=O)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  
 $-\text{OC(=O)N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{n}}$ ,  $-\text{OC}_{\text{2-6alkyl}}\text{NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $-\text{OC}_{\text{2-6alkyl}}\text{OR}^{\text{m}}$ ,  $-\text{SR}^{\text{m}}$ ,  $-\text{S(=O)R}^{\text{n}}$ ,  
 $-\text{S(=O)}_2\text{R}^{\text{n}}$ ,  $-\text{S(=O)}_2\text{NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $-\text{S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)R}^{\text{n}}$ ,  $-\text{S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)OR}^{\text{n}}$ ,  
 $-\text{S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $-\text{NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $-\text{N(R}^{\text{m}}\text{)C(=O)R}^{\text{n}}$ ,  $-\text{N(R}^{\text{m}}\text{)C(=O)OR}^{\text{n}}$ ,  
15       $-\text{N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $-\text{N(R}^{\text{m}}\text{)C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $-\text{N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{n}}$ ,  
 $-\text{N(R}^{\text{m}}\text{)S(=O)}_2\text{NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $-\text{NR}^{\text{m}}\text{C}_{\text{2-6alkyl}}\text{NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $-\text{NR}^{\text{m}}\text{C}_{\text{2-6alkyl}}\text{OR}^{\text{m}}$ ,  $-\text{C(=O)R}^{\text{s}}$ ,  
 $-\text{C(=O)OR}^{\text{s}}$ ,  $-\text{C(=O)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $-\text{C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $-\text{OR}^{\text{s}}$ ,  $-\text{OC(=O)R}^{\text{s}}$ ,  
 $-\text{OC(=O)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $-\text{OC(=O)N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{s}}$ ,  $-\text{OC}_{\text{2-6alkyl}}\text{NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $-\text{OC}_{\text{2-6alkyl}}\text{OR}^{\text{s}}$ ,  
 $-\text{SR}^{\text{s}}$ ,  $-\text{S(=O)R}^{\text{s}}$ ,  $-\text{S(=O)}_2\text{R}^{\text{s}}$ ,  $-\text{S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)R}^{\text{s}}$ ,  
20       $-\text{S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)OR}^{\text{s}}$ ,  $-\text{S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $-\text{NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $-\text{N(R}^{\text{m}}\text{)C(=O)R}^{\text{s}}$ ,  
 $-\text{N(R}^{\text{m}}\text{)C(=O)OR}^{\text{s}}$ ,  $-\text{N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $-\text{N(R}^{\text{m}}\text{)C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  
 $-\text{N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{s}}$ ,  $-\text{N(R}^{\text{m}}\text{)S(=O)}_2\text{NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $-\text{NR}^{\text{m}}\text{C}_{\text{2-6alkyl}}\text{NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $-\text{NR}^{\text{m}}\text{C}_{\text{2-6alkyl}}\text{OR}^{\text{s}}$   
and  $\text{C}_{\text{1-4alkyl}}$  substituted by 1 or 2 groups selected from  $\text{C}_{\text{1-2haloalkyl}}$ , halo,  
cyano, nitro,  $-\text{C(=O)R}^{\text{n}}$ ,  $-\text{C(=O)OR}^{\text{n}}$ ,  $-\text{C(=O)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $-\text{C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $-\text{OR}^{\text{m}}$ ,  
25       $-\text{OC(=O)R}^{\text{n}}$ ,  $-\text{OC(=O)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $-\text{OC(=O)N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{n}}$ ,  $-\text{OC}_{\text{2-6alkyl}}\text{NR}^{\text{m}}\text{R}^{\text{m}}$ ,  
 $-\text{OC}_{\text{2-6alkyl}}\text{OR}^{\text{m}}$ ,  $-\text{SR}^{\text{m}}$ ,  $-\text{S(=O)R}^{\text{n}}$ ,  $-\text{S(=O)}_2\text{R}^{\text{n}}$ ,  $-\text{S(=O)}_2\text{NR}^{\text{m}}\text{R}^{\text{m}}$ ,  
 $-\text{S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)R}^{\text{n}}$ ,  $-\text{S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)OR}^{\text{n}}$ ,  $-\text{S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  
 $-\text{NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $-\text{N(R}^{\text{m}}\text{)C(=O)R}^{\text{n}}$ ,  $-\text{N(R}^{\text{m}}\text{)C(=O)OR}^{\text{n}}$ ,  $-\text{N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  
 $-\text{N(R}^{\text{m}}\text{)C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $-\text{N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{n}}$ ,  $-\text{N(R}^{\text{m}}\text{)S(=O)}_2\text{NR}^{\text{m}}\text{R}^{\text{m}}$ ,  
30       $-\text{NR}^{\text{m}}\text{C}_{\text{2-6alkyl}}\text{NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $-\text{C(=O)R}^{\text{s}}$ ,  $-\text{C(=O)OR}^{\text{s}}$ ,  $-\text{C(=O)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $-\text{C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  
 $-\text{OR}^{\text{s}}$ ,  $-\text{OC(=O)R}^{\text{s}}$ ,  $-\text{OC(=O)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $-\text{OC(=O)N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{s}}$ ,  $-\text{OC}_{\text{2-6alkyl}}\text{NR}^{\text{m}}\text{R}^{\text{s}}$ ,  
 $-\text{OC}_{\text{2-6alkyl}}\text{OR}^{\text{s}}$ ,  $-\text{SR}^{\text{s}}$ ,  $-\text{S(=O)R}^{\text{s}}$ ,  $-\text{S(=O)}_2\text{R}^{\text{s}}$ ,  $-\text{S(=O)}_2\text{NR}^{\text{m}}\text{R}^{\text{s}}$ ,

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$\text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)R}^{\text{s}}$ ,  $\text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)OR}^{\text{s}}$ ,  $\text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  
 $\text{-NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $\text{-N(R}^{\text{m}}\text{)C(=O)R}^{\text{s}}$ ,  $\text{-N(R}^{\text{m}}\text{)C(=O)OR}^{\text{s}}$ ,  $\text{-N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  
 $\text{-N(R}^{\text{m}}\text{)C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $\text{-N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{s}}$ ,  $\text{-N(R}^{\text{m}}\text{)S(=O)}_2\text{NR}^{\text{m}}\text{R}^{\text{s}}$ ,  
 $\text{-NR}^{\text{m}}\text{C}_{2\text{-6alkyl}}\text{NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $\text{-NR}^{\text{m}}\text{C}_{2\text{-6alkyl}}\text{OR}^{\text{s}}$  and  $\text{-NR}^{\text{m}}\text{C}_{2\text{-6alkyl}}\text{OR}^{\text{m}}$ ;  
  
 5            $\text{R}^{\text{4}}$  is a saturated or unsaturated 5- or 6-membered ring containing 0, 1, 2 or  
 3 atoms selected from O, N and S that is optionally vicinally fused with a  
 saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected  
 from O, N and S with the remaining atoms being carbon, so long as the  
 combination of O and S atoms is not greater than 2, wherein the ring and bridge  
 10          are substituted by 0, 1, 2 or 3 substituents independently selected from  $\text{C}_{1\text{-8alkyl}}$ ,  
 $\text{C}_{1\text{-4haloalkyl}}$ , halo, cyano, nitro,  $\text{-C(=O)R}^{\text{n}}$ ,  $\text{-C(=O)OR}^{\text{n}}$ ,  $\text{-C(=O)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  
 $\text{-C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $\text{-OR}^{\text{m}}$ ,  $\text{-OC(=O)R}^{\text{n}}$ ,  $\text{-OC(=O)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  
 $\text{-OC(=O)N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{n}}$ ,  $\text{-OC}_{2\text{-6alkyl}}\text{NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $\text{-OC}_{2\text{-6alkyl}}\text{OR}^{\text{m}}$ ,  $\text{-SR}^{\text{m}}$ ,  $\text{-S(=O)R}^{\text{n}}$ ,  
 $\text{-S(=O)}_2\text{R}^{\text{n}}$ ,  $\text{-S(=O)}_2\text{NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $\text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)R}^{\text{n}}$ ,  $\text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)OR}^{\text{n}}$ ,  
 15           $\text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $\text{-NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $\text{-N(R}^{\text{m}}\text{)C(=O)R}^{\text{n}}$ ,  $\text{-N(R}^{\text{m}}\text{)C(=O)OR}^{\text{n}}$ ,  
 $\text{-N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $\text{-N(R}^{\text{m}}\text{)C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $\text{-N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{n}}$ ,  
 $\text{-N(R}^{\text{m}}\text{)S(=O)}_2\text{NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $\text{-NR}^{\text{m}}\text{C}_{2\text{-6alkyl}}\text{NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $\text{-NR}^{\text{m}}\text{C}_{2\text{-6alkyl}}\text{OR}^{\text{m}}$ ,  $\text{-C(=O)R}^{\text{s}}$ ,  
 $\text{-C(=O)OR}^{\text{s}}$ ,  $\text{-C(=O)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $\text{-C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $\text{-OR}^{\text{s}}$ ,  $\text{-OC(=O)R}^{\text{s}}$ ,  
 $\text{-OC(=O)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $\text{-OC(=O)N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{s}}$ ,  $\text{-OC}_{2\text{-6alkyl}}\text{NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $\text{-OC}_{2\text{-6alkyl}}\text{OR}^{\text{s}}$ ,  
 20           $\text{-SR}^{\text{s}}$ ,  $\text{-S(=O)R}^{\text{s}}$ ,  $\text{-S(=O)}_2\text{R}^{\text{s}}$ ,  $\text{-S(=O)}_2\text{NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $\text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)R}^{\text{s}}$ ,  
 $\text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)OR}^{\text{s}}$ ,  $\text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $\text{-NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $\text{-N(R}^{\text{m}}\text{)C(=O)R}^{\text{s}}$ ,  
 $\text{-N(R}^{\text{m}}\text{)C(=O)OR}^{\text{s}}$ ,  $\text{-N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $\text{-N(R}^{\text{m}}\text{)C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  
 $\text{-N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{s}}$ ,  $\text{-N(R}^{\text{m}}\text{)S(=O)}_2\text{NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $\text{-NR}^{\text{m}}\text{C}_{2\text{-6alkyl}}\text{NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $\text{-NR}^{\text{m}}\text{C}_{2\text{-6alkyl}}\text{OR}^{\text{s}}$   
 and  $\text{C}_{1\text{-4alkyl}}$  substituted by 1 or 2 groups selected from  $\text{C}_{1\text{-2haloalkyl}}$ , halo,  
 25          cyano, nitro,  $\text{-C(=O)R}^{\text{n}}$ ,  $\text{-C(=O)OR}^{\text{n}}$ ,  $\text{-C(=O)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $\text{-C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $\text{-OR}^{\text{m}}$ ,  
 $\text{-OC(=O)R}^{\text{n}}$ ,  $\text{-OC(=O)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $\text{-OC(=O)N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{n}}$ ,  $\text{-OC}_{2\text{-6alkyl}}\text{NR}^{\text{m}}\text{R}^{\text{m}}$ ,  
 $\text{-OC}_{2\text{-6alkyl}}\text{OR}^{\text{m}}$ ,  $\text{-SR}^{\text{m}}$ ,  $\text{-S(=O)R}^{\text{n}}$ ,  $\text{-S(=O)}_2\text{R}^{\text{n}}$ ,  $\text{-S(=O)}_2\text{NR}^{\text{m}}\text{R}^{\text{m}}$ ,  
 $\text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)R}^{\text{n}}$ ,  $\text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)OR}^{\text{n}}$ ,  $\text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  
 $\text{-NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $\text{-N(R}^{\text{m}}\text{)C(=O)R}^{\text{n}}$ ,  $\text{-N(R}^{\text{m}}\text{)C(=O)OR}^{\text{n}}$ ,  $\text{-N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  
 30           $\text{-N(R}^{\text{m}}\text{)C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $\text{-N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{n}}$ ,  $\text{-N(R}^{\text{m}}\text{)S(=O)}_2\text{NR}^{\text{m}}\text{R}^{\text{m}}$ ,  
 $\text{-NR}^{\text{m}}\text{C}_{2\text{-6alkyl}}\text{NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $\text{-C(=O)R}^{\text{s}}$ ,  $\text{-C(=O)OR}^{\text{s}}$ ,  $\text{-C(=O)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $\text{-C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  
 $\text{-OR}^{\text{s}}$ ,  $\text{-OC(=O)R}^{\text{s}}$ ,  $\text{-OC(=O)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $\text{-OC(=O)N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{s}}$ ,  $\text{-OC}_{2\text{-6alkyl}}\text{NR}^{\text{m}}\text{R}^{\text{s}}$ ,

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- OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- 5 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, and the ring and bridge carbon atoms are substituted with 0, 1 or 2 =O groups;

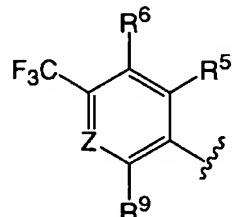
R<sup>7</sup> is C<sub>2-8</sub>alkyl, C<sub>1-5</sub>haloalkyl, I, Br;

- R<sup>9</sup> is independently, at each instance, H, C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OC<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>,
- 10 -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>;

Y is NH; and

Z is CR<sup>8</sup> or N; or

(E) R<sup>1</sup> is



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R<sup>2</sup> is H, -OR<sup>m</sup>, Cl, C<sub>1-3</sub>haloalkyl or C<sub>1-6</sub>alkyl;

- R<sup>4</sup> is a saturated or unsaturated 5- or 6-membered ring containing 0, 1, 2 or 3 atoms selected from O, N and S, so long as the combination of O and S atoms is not greater than 1, wherein the ring is substituted by 0, 1, 2 or 3 substituents
- 20 independently selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>n</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>,
- 25

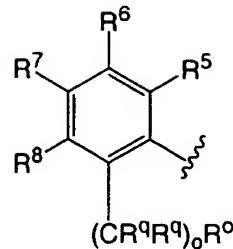
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- SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>,
- N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,
- N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup>
- 5 and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>,
- SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>,
- 10 -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,
- OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>,
- OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- 15 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; wherein R<sup>4</sup> is not unsubstituted phenyl;
- 20 R<sup>9</sup> is independently, at each instance, H, C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OC<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>;
- Y is NH; and
- 25 Z is CR<sup>8</sup> or N.

123. A compound according to Claim 122, wherein:

R<sup>1</sup> is

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$\text{R}^2$  is H, -OR<sup>m</sup>, halo, C<sub>1-3</sub>haloalkyl or C<sub>1-6</sub>alkyl;

$\text{R}^4$  is a saturated or unsaturated 5- or 6-membered ring containing 0, 1, 2 or 3 atoms selected from O, N and S that is optionally vicinally fused with a

5    saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected from O, N and S with the remaining atoms being carbon, so long as the combination of O and S atoms is not greater than 2, wherein the ring and bridge are substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>,

10   -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)R<sup>n</sup>,

15   -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>,

20   -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,

25   -N(R<sup>m</sup>)C(=O)OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,

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- NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,
- OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>,
- OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- 5 -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; and the ring and bridge carbon atoms are substituted with 0, 1 or 2 =O groups;

R<sup>7</sup> is C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OC<sub>1-6</sub>alkyl,

- 10 -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>,
- NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>;

R<sup>6</sup> is a saturated, partially-saturated or unsaturated 5-, 6- or 7-membered monocyclic or 7-, 8-, 9-, 10- or 11-membered bicyclic ring containing 0, 1, 2, 3 or 4 atoms selected from N, O and S, so long as the combination of O and S atoms is not greater than 2, wherein the carbon atoms of the ring are substituted by 0, 1 or 2 oxo groups, wherein the ring is substituted by 0, 1, 2 or 3 substituents independently selected from R<sup>p</sup>;

- R<sup>p</sup> is independently at each instance C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>,
- 20 -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>,
- OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- 25 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; and

Y is O or NH.

**124. A compound according to Claim 123, wherein:**

- R<sup>4</sup> is a saturated or unsaturated 5- or 6-membered ring containing 0, 1, 2 or 3 atoms selected from O, N and S that is vicinally fused with a saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected from O, N and S with the remaining atoms being carbon, so long as the combination of O

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and S atoms is not greater than 2, wherein the ring and bridge are substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>,

5 -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>,

10 -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>,

15 -N(R<sup>m</sup>)S(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>,

20 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>,

25 -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; and the ring

30 and bridge carbon atoms are substituted with 0, 1 or 2 =O groups.

125. A compound according to Claim 123, wherein R<sup>4</sup> is a phenyl ring that is vicinally fused with a saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected from O, N and S with the remaining atoms being carbon, so long as the combination of O and S atoms is not greater than 2,

5       wherein the ring and bridge are substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>,

10     -2N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and C<sub>1-4</sub>alkyl

15      substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,

20     -2N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,

25     -2N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,

30     -2N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,

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-NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; and the bridge carbon atoms are substituted with 0, 1 or 2 =O groups.

126. A compound according to Claim 123, wherein R<sup>7</sup> is C<sub>1-9</sub>alkyl,  
5 C<sub>1-4</sub>haloalkyl, halo, -OC<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>R<sup>m</sup> or  
-NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl.

127. A compound according to Claim 123, wherein R<sup>7</sup> is C<sub>1-5</sub>alkyl,  
C<sub>1-4</sub>haloalkyl, I, Br or Cl.

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127. A compound according to Claim 123, wherein R<sup>7</sup> is tert-butyl or  
trifluoromethyl.

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129. A compound according to Claim 123, wherein R<sup>o</sup> is a saturated,  
partially-saturated or unsaturated 5-, 6- or 7-membered monocyclic ring  
containing 0, 1, 2 or 3 atoms selected from N, O and S, so long as the combination  
of O and S atoms is not greater than 1, wherein the carbon atoms of the ring are  
substituted by 0, 1 or 2 oxo groups, wherein the ring is substituted by 0, 1, 2 or 3  
substituents independently selected from R<sup>p</sup>.

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130. A compound according to Claim 123, wherein R<sup>o</sup> is a saturated,  
partially-saturated or unsaturated 6-membered ring containing 0, 1, 2 or 3 N  
atoms, wherein the carbon atoms of the ring are substituted by 0, 1 or 2 oxo  
groups, wherein the ring is substituted by 0, 1, 2 or 3 substituents independently  
selected from R<sup>p</sup>.

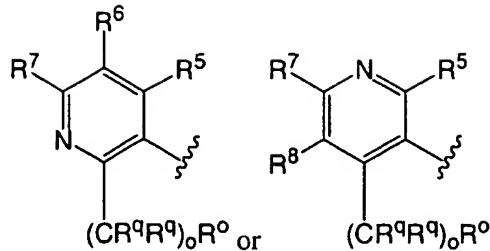
131. A compound according to Claim 123, wherein Y is O.

132. A compound according to Claim 123, wherein Y is NH.

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133. A compound according to Claim 122, wherein:  
R<sup>1</sup> is

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$R^2$  is H, -OR<sup>m</sup>, halo, C<sub>1-3</sub>haloalkyl or C<sub>1-6</sub>alkyl;

$R^4$  is a saturated or unsaturated 5- or 6-membered ring containing 0, 1, 2 or 3 atoms selected from O, N and S that is optionally vicinally fused with a

5     saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected from O, N and S with the remaining atoms being carbon, so long as the combination of O and S atoms is not greater than 2, wherein the ring and bridge are substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>,

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-N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup>

15    and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup>

20    and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup>

25    and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup>

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- NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,
- OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>,
- OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- 5 -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; and the ring and bridge carbon atoms are substituted with 0, 1 or 2 =O groups;
- R<sup>7</sup> is C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OC<sub>1-6</sub>alkyl,
- 10 -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>,
- NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>; [C<sub>1-8</sub>alkyl, C<sub>1-5</sub>haloalkyl, I, Br or Cl]

R<sup>9</sup> is a saturated, partially-saturated or unsaturated 5-, 6- or 7-membered monocyclic or 7-, 8-, 9-, 10- or 11-membered bicyclic ring containing 0, 1, 2, 3 or 15 4 atoms selected from N, O and S, so long as the combination of O and S atoms is not greater than 2, wherein the carbon atoms of the ring are substituted by 0, 1 or 2 oxo groups, wherein the ring is substituted by 0, 1, 2 or 3 substituents independently selected from R<sup>p</sup>;

R<sup>p</sup> is independently at each instance C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, 20 nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, 25 -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; and

Y is O or NH.

134. A compound according to Claim 133, wherein R<sup>4</sup> is a saturated or 30 unsaturated 5- or 6-membered ring containing 0, 1, 2 or 3 atoms selected from O, N and S that is vicinally fused with a saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected from O, N and S with the remaining atoms

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being carbon, so long as the combination of O and S atoms is not greater than 2, wherein the ring and bridge are substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; and the ring and bridge carbon atoms are substituted with 0, 1 or 2 =O groups.

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135. A compound according to Claim 133, wherein R<sup>4</sup> is a phenyl ring  
 that is vicinally fused with a saturated or unsaturated 3- or 4-atom bridge  
 containing 0, 1, 2 or 3 atoms selected from O, N and S with the remaining atoms  
 being carbon, so long as the combination of O and S atoms is not greater than 2,  
 5 wherein the ring and bridge are substituted by 0, 1, 2 or 3 substituents  
 independently selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro,  
 -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>,  
 -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>,  
 -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>,  
 10 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>,  
 -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,  
 -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,  
 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>,  
 -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>,  
 15 -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>,  
 -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>,  
 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>,  
 -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>,  
 -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and C<sub>1-4</sub>alkyl  
 20 substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro,  
 -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>,  
 -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>,  
 -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>,  
 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>,  
 25 -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,  
 -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,  
 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,  
 -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>,  
 -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,  
 30 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,  
 -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,  
 -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,

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-NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; and the bridge carbon atoms are substituted with 0, 1 or 2 =O groups.

136. A compound according to Claim 133, wherein R<sup>7</sup> is C<sub>1-9</sub>alkyl,  
5 C<sub>1-4</sub>haloalkyl, halo, -OC<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>R<sup>m</sup> or  
-NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl.

137. A compound according to Claim 133, wherein R<sup>7</sup> is C<sub>1-5</sub>alkyl,  
C<sub>1-4</sub>haloalkyl, I, Br or Cl.

10 138. A compound according to Claim 133, wherein R<sup>7</sup> is tert-butyl or  
trifluoromethyl.

15 139. A compound according to Claim 133, wherein R<sup>9</sup> is a saturated,  
partially-saturated or unsaturated 5-, 6- or 7-membered monocyclic ring  
containing 0, 1, 2 or 3 atoms selected from N, O and S, so long as the combination  
of O and S atoms is not greater than 1, wherein the carbon atoms of the ring are  
substituted by 0, 1 or 2 oxo groups, wherein the ring is substituted by 0, 1, 2 or 3  
substituents independently selected from R<sup>p</sup>.

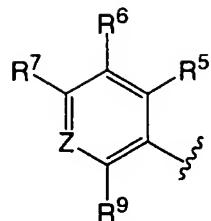
20 140. A compound according to Claim 133, wherein R<sup>9</sup> is a saturated,  
partially-saturated or unsaturated 6-membered ring containing 0, 1, 2 or 3 N  
atoms, wherein the carbon atoms of the ring are substituted by 0, 1 or 2 oxo  
groups, wherein the ring is substituted by 0, 1, 2 or 3 substituents independently  
25 selected from R<sup>p</sup>.

141. A compound according to Claim 133, wherein Y is O.

142. A compound according to Claim 133, wherein Y is NH.

30 143. A compound according to Claim 122, wherein:  
R<sup>1</sup> is

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$R^2$  is H, -OR<sup>m</sup>, halo, C<sub>1-3</sub>haloalkyl or C<sub>1-6</sub>alkyl;

$R^4$  is a saturated, partially-saturated or unsaturated 8-, 9-, 10 or

11-membered bicyclic heterocycle containing 1, 2, 3, 4 or 5 atoms selected from

- 5 O, N and S, so long as the combination of O and S atoms is not greater than 2, but excluding quinolin-6-yl, 4,5,6,7-tetrahydro-benzo[b]thiophen-2-yl, benzothiazol-2-yl, 2,3-dihydro-benzo[1,4]dioxin-6-yl, wherein the heterocycle is substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-9</sub>alkyl, oxo, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OR<sup>m</sup>, -S(=O)<sub>n</sub>C<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>,
- 10 -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>, -C(=O)C<sub>1-6</sub>alkyl, -OC(=O)C<sub>1-6</sub>alkyl, -C(=O)NR<sup>m</sup>C<sub>1-6</sub>alkyl, -NR<sup>m</sup>C(=O)C<sub>1-6</sub>alkyl -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)NR<sup>m</sup>R<sup>s</sup>,
- 15 -S(=O)R<sup>s</sup>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)R<sup>s</sup>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)R<sup>s</sup>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)R<sup>n</sup>, -S(=O)NR<sup>m</sup>R<sup>m</sup>, -S(=O)N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)NR<sup>m</sup>R<sup>s</sup>, -S(=O)R<sup>s</sup>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)R<sup>s</sup>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)R<sup>s</sup>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- 25 -N(R<sup>m</sup>)S(=O)R<sup>s</sup>

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- NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; wherein R<sup>4</sup> is  
not 2-aminocarbonylmethyl-2,3-dihydro-benzo[1,4]dioxin-8-yl, 2-cyanomethyl-
- 5 2,3-dihydro-benzo[1,4]dioxin-8-yl, quinolin-3-yl, 3H-quinazolin-4-on-3-yl,  
benzo[1,3]dioxol-5-yl, 3,3-dimethyl-1,3-dihydro-indol-2-on-6-yl or 4,4-dimethyl-  
3,4-dihydro-1H-quinolin-2-on-7-yl;
- R<sup>7</sup> is C<sub>1-8</sub>alkyl, C<sub>1-5</sub>haloalkyl, I or Br;
- R<sup>9</sup> is H, C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OC<sub>1-6</sub>alkyl,
- 10 -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>,
- NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>;
- Y is NH; and
- Z is CR<sup>8</sup> or N.

15 144. A compound according to Claim 143, wherein R<sup>4</sup> is a heterocycle selected from indole, 3H-indole, benzo[b]furan, benzothiophene, 1H-indazole, benzimidazole, benzthiazole, 1H-benzotriazole, 7-quinoline, 8-quinoline, 1,2,3,4-tetrahydroquinoline, isoquinoline, cinnoline, phthalazine, quinazoline and quinoxaline, wherein the heterocycle is substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-9</sub>alkyl, oxo, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OR<sup>m</sup>, -S(=O)<sub>n</sub>C<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>, -C(=O)C<sub>1-6</sub>alkyl, -OC(=O)C<sub>1-6</sub>alkyl, -C(=O)NR<sup>m</sup>C<sub>1-6</sub>alkyl, -NR<sup>m</sup>C(=O)C<sub>1-6</sub>alkyl -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup>

20 and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>,

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-SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>,  
 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>,  
 -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>,  
 -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>,  
 5 -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>,  
 -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,  
 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,  
 -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,  
 -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,  
 10 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>.

145. A compound according to Claim 143, wherein R<sup>4</sup> is a heterocycle selected from 6-indole, 7-indole, 6-3H-indole, 7-3H-indole, 6-benzo[b]furan, 7-benzo[b]furan, 6-benzothiophene, 7-benzothiophene, 6-1H-indazole, 7-1H-indazole, benzimidazole, benzthiazole, 1H-benzotriazole, 7-quinoline, 8-quinoline, 7-1,2,3,4-tetrahydroquinoline, 8-1,2,3,4-tetrahydroquinoline, isoquinolin-7-yl, isoquinolin-8-yl, 7-cinnoline, 8-cinnoline, phthalazine, 7-quinazoline, 8-quinazoline and quinoxaline, wherein the heterocycle is substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-9</sub>alkyl, oxo,  
 15 C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OR<sup>m</sup>, -S(=O)<sub>n</sub>C<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl,  
 -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>, -C(=O)C<sub>1-6</sub>alkyl, -OC(=O)C<sub>1-6</sub>alkyl,  
 -C(=O)NR<sup>m</sup>C<sub>1-6</sub>alkyl, -NR<sup>m</sup>C(=O)C<sub>1-6</sub>alkyl -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>,  
 -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>,  
 20 -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>,  
 -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>,  
 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>,  
 -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>,  
 25 -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and C<sub>1-4</sub>alkyl  
 substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro,  
 -C(=O)R<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>,  
 -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>,  
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$\text{-SR}^m$ ,  $\text{-S(=O)R}^n$ ,  $\text{-S(=O)}_2\text{R}^n$ ,  $\text{-S(=O)}_2\text{NR}^m\text{R}^m$ ,  $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)R}^n$ ,  
 $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)OR}^n$ ,  $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)NR}^m\text{R}^m$ ,  $\text{-N(R}^m\text{)C(=O)R}^n$ ,  
 $\text{-N(R}^m\text{)C(=O)OR}^n$ ,  $\text{-N(R}^m\text{)C(=O)NR}^m\text{R}^m$ ,  $\text{-N(R}^m\text{)C(=NR}^m\text{)NR}^m\text{R}^m$ ,  
 $\text{-N(R}^m\text{)S(=O)}_2\text{R}^n$ ,  $\text{-N(R}^m\text{)S(=O)}_2\text{NR}^m\text{R}^m$ ,  $\text{-C(=O)R}^s$ ,  $\text{-C(=O)OR}^s$ ,  $\text{-C(=O)NR}^m\text{R}^s$ ,  
5     $\text{-C(=NR}^m\text{)NR}^m\text{R}^s$ ,  $\text{-OR}^s$ ,  $\text{-OC(=O)R}^s$ ,  $\text{-OC(=O)NR}^m\text{R}^s$ ,  $\text{-OC(=O)N(R}^m\text{)S(=O)}_2\text{R}^s$ ,  
 $\text{-OC}_{2-6}\text{alkylNR}^m\text{R}^s$ ,  $\text{-OC}_{2-6}\text{alkylOR}^s$ ,  $\text{-SR}^s$ ,  $\text{-S(=O)R}^s$ ,  $\text{-S(=O)}_2\text{R}^s$ ,  $\text{-S(=O)}_2\text{NR}^m\text{R}^s$ ,  
 $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)R}^s$ ,  $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)OR}^s$ ,  $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)NR}^m\text{R}^s$ ,  
 $\text{-NR}^m\text{R}^s$ ,  $\text{-N(R}^m\text{)C(=O)R}^s$ ,  $\text{-N(R}^m\text{)C(=O)OR}^s$ ,  $\text{-N(R}^m\text{)C(=O)NR}^m\text{R}^s$ ,  
 $\text{-N(R}^m\text{)C(=NR}^m\text{)NR}^m\text{R}^s$ ,  $\text{-N(R}^m\text{)S(=O)}_2\text{R}^s$ ,  $\text{-N(R}^m\text{)S(=O)}_2\text{NR}^m\text{R}^s$ ,  
10    $\text{-NR}^m\text{C}_{2-6}\text{alkylNR}^m\text{R}^s$ ,  $\text{-NR}^m\text{C}_{2-6}\text{alkylOR}^s$  and  $\text{-NR}^m\text{C}_{2-6}\text{alkylOR}^m$ .

146. A compound according to Claim 143, wherein  $R^9$  is  $C_{1-9}$ alkyl,  
 $C_{1-4}$ haloalkyl, halo, nitro, cyano,  $\text{-OC}_{1-6}$ alkyl,  $\text{-O-C}_{1-4}$ haloalkyl,  
 $\text{-O-C}_{1-6}$ alkylNR<sup>m</sup>R<sup>m</sup>,  $\text{-O-C}_{1-6}$ alkylOR<sup>m</sup>,  $\text{-NR}^m\text{R}^m$ ,  $\text{-NR}^m\text{-C}_{1-4}$ haloalkyl,  
15    $\text{-NR}^m\text{-C}_{1-6}$ alkylNR<sup>m</sup>R<sup>m</sup> or  $\text{-NR}^m\text{-C}_{1-6}$ alkylOR<sup>m</sup>.

147. A compound according to Claim 143, wherein  $R^9$  is H.

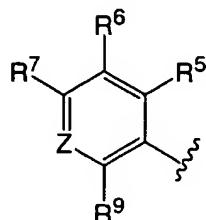
20   148. A compound according to Claim 143, wherein Z is CR<sup>8</sup>.

149. A compound according to Claim 143, wherein Z is N.

150. A compound according to Claim 101, wherein  $R^7$  is tert-butyl or  
 trifluoromethyl.

25

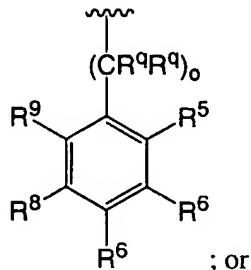
151. A compound according to Claim 122, wherein:  
 $R^1$  is



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$R^2$  is  $C_{1-6}$ alkyl substituted by 1, 2 or 3 substituents selected from  $C_{1-4}$ haloalkyl, halo, cyano, nitro,  $-C(=O)R^n$ ,  $-C(=O)OR^n$ ,  $-C(=O)NR^mR^m$ ,  $-C(=NR^m)NR^mR^m$ ,  $-OR^m$ ,  $-OC(=O)R^n$ ,  $-OC(=O)NR^mR^m$ ,  $-OC(=O)N(R^m)S(=O)R^n$ ,  $-OC_{2-6}$ alkyl $NR^mR^m$ ,  $-OC_{2-6}$ alkyl $OR^m$ ,  $-SR^m$ ,  $-S(=O)R^n$ ,  $-S(=O)_2R^n$ ,  $-S(=O)_2NR^mR^m$ ,  $-S(=O)_2N(R^m)C(=O)R^n$ ,  $-S(=O)_2N(R^m)C(=O)OR^n$ ,  $-S(=O)_2N(R^m)C(=O)NR^mR^m$ ,  $-NR^mR^m$ ,  $-N(R^m)C(=O)R^n$ ,  $-N(R^m)C(=O)OR^n$ ,  $-N(R^m)C(=O)NR^mR^m$ ,  $-N(R^m)C(=NR^m)NR^mR^m$ ,  $-N(R^m)S(=O)_2R^n$ ,  $-N(R^m)S(=O)_2NR^mR^m$ ,  $-NR^mC_{2-6}$ alkyl $NR^mR^m$  and  $-NR^mC_{2-6}$ alkyl $OR^m$ ; or

$R^2$  is



10 ; or

$R^2$  is a saturated or unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 heteroatoms independently selected from N, O and S, wherein no more than 2 of the ring members are O or S, wherein the heterocycle is optionally fused with a phenyl ring, and the heterocycle or fused phenyl ring is substituted by 0, 1, 2 or 3 substituents independently selected from  $R^5$ ,  $R^6$  and  $R^7$ ;

15  $R^4$  is a saturated or unsaturated 5- or 6-membered ring containing 0, 1, 2 or 3 atoms selected from O, N and S that is optionally vicinally fused with a saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected from O, N and S with the remaining atoms being carbon, so long as the 20 combination of O and S atoms is not greater than 2, wherein the ring and bridge are substituted by 0, 1, 2 or 3 substituents independently selected from  $C_{1-8}$ alkyl,  $C_{1-4}$ haloalkyl, halo, cyano, nitro,  $-C(=O)R^n$ ,  $-C(=O)OR^n$ ,  $-C(=O)NR^mR^m$ ,  $-C(=NR^m)NR^mR^m$ ,  $-OR^m$ ,  $-OC(=O)R^n$ ,  $-OC(=O)NR^mR^m$ ,  $-OC(=O)N(R^m)S(=O)R^n$ ,  $-OC_{2-6}$ alkyl $NR^mR^m$ ,  $-OC_{2-6}$ alkyl $OR^m$ ,  $-SR^m$ ,  $-S(=O)R^n$ ,  $-S(=O)_2R^n$ ,  $-S(=O)_2NR^mR^m$ ,  $-S(=O)_2N(R^m)C(=O)R^n$ ,  $-S(=O)_2N(R^m)C(=O)OR^n$ ,  $25 -S(=O)_2N(R^m)C(=O)NR^mR^m$ ,  $-NR^mR^m$ ,  $-N(R^m)C(=O)R^n$ ,  $-N(R^m)C(=O)OR^n$ ,  $-N(R^m)C(=O)NR^mR^m$ ,  $-N(R^m)C(=NR^m)NR^mR^m$ ,  $-N(R^m)S(=O)_2R^n$ ,

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$\text{-N}(\text{R}^m)\text{S}(=\text{O})_2\text{NR}^m\text{R}^m$ ,  $\text{-NR}^m\text{C}_{2-6}\text{alkylNR}^m\text{R}^m$ ,  $\text{-NR}^m\text{C}_{2-6}\text{alkylOR}^m$ ,  $\text{-C(=O)R}^s$ ,  
 $\text{-C(=O)OR}^s$ ,  $\text{-C(=O)NR}^m\text{R}^s$ ,  $\text{-C(=NR}^m)\text{NR}^m\text{R}^s$ ,  $\text{-OR}^s$ ,  $\text{-OC(=O)R}^s$ ,  
 $\text{-OC(=O)NR}^m\text{R}^s$ ,  $\text{-OC(=O)N}(\text{R}^m)\text{S}(=\text{O})_2\text{R}^s$ ,  $\text{-OC}_{2-6}\text{alkylNR}^m\text{R}^s$ ,  $\text{-OC}_{2-6}\text{alkylOR}^s$ ,  
 $\text{-SR}^s$ ,  $\text{-S(=O)R}^s$ ,  $\text{-S(=O)}_2\text{R}^s$ ,  $\text{-S(=O)}_2\text{NR}^m\text{R}^s$ ,  $\text{-S(=O)}_2\text{N}(\text{R}^m)\text{C(=O)R}^s$ ,  
5     $\text{-S(=O)}_2\text{N}(\text{R}^m)\text{C(=O)OR}^s$ ,  $\text{-S(=O)}_2\text{N}(\text{R}^m)\text{C(=O)NR}^m\text{R}^s$ ,  $\text{-NR}^m\text{R}^s$ ,  $\text{-N}(\text{R}^m)\text{C(=O)R}^s$ ,  
 $\text{-N}(\text{R}^m)\text{C(=O)OR}^s$ ,  $\text{-N}(\text{R}^m)\text{C(=O)NR}^m\text{R}^s$ ,  $\text{-N}(\text{R}^m)\text{C(=NR}^m)\text{NR}^m\text{R}^s$ ,  
 $\text{-N}(\text{R}^m)\text{S}(=\text{O})_2\text{R}^s$ ,  $\text{-N}(\text{R}^m)\text{S}(=\text{O})_2\text{NR}^m\text{R}^s$ ,  $\text{-NR}^m\text{C}_{2-6}\text{alkylNR}^m\text{R}^s$ ,  $\text{-NR}^m\text{C}_{2-6}\text{alkylOR}^s$   
and  $\text{C}_{1-4}\text{alkyl}$  substituted by 1 or 2 groups selected from  $\text{C}_{1-2}\text{haloalkyl}$ , halo,  
cyano, nitro,  $\text{-C(=O)R}^n$ ,  $\text{-C(=O)OR}^n$ ,  $\text{-C(=O)NR}^m\text{R}^m$ ,  $\text{-C(=NR}^m)\text{NR}^m\text{R}^m$ ,  $\text{-OR}^m$ ,  
10    $\text{-OC(=O)R}^n$ ,  $\text{-OC(=O)NR}^m\text{R}^m$ ,  $\text{-OC(=O)N}(\text{R}^m)\text{S}(=\text{O})_2\text{R}^n$ ,  $\text{-OC}_{2-6}\text{alkylNR}^m\text{R}^m$ ,  
 $\text{-OC}_{2-6}\text{alkylOR}^m$ ,  $\text{-SR}^m$ ,  $\text{-S(=O)R}^n$ ,  $\text{-S(=O)}_2\text{R}^n$ ,  $\text{-S(=O)}_2\text{NR}^m\text{R}^m$ ,  
 $\text{-S(=O)}_2\text{N}(\text{R}^m)\text{C(=O)R}^n$ ,  $\text{-S(=O)}_2\text{N}(\text{R}^m)\text{C(=O)OR}^n$ ,  $\text{-S(=O)}_2\text{N}(\text{R}^m)\text{C(=O)NR}^m\text{R}^m$ ,  
 $\text{-NR}^m\text{R}^m$ ,  $\text{-N}(\text{R}^m)\text{C(=O)R}^n$ ,  $\text{-N}(\text{R}^m)\text{C(=O)OR}^n$ ,  $\text{-N}(\text{R}^m)\text{C(=O)NR}^m\text{R}^m$ ,  
 $\text{-N}(\text{R}^m)\text{C(=NR}^m)\text{NR}^m\text{R}^m$ ,  $\text{-N}(\text{R}^m)\text{S}(=\text{O})_2\text{R}^n$ ,  $\text{-N}(\text{R}^m)\text{S}(=\text{O})_2\text{NR}^m\text{R}^m$ ,  
15    $\text{-NR}^m\text{C}_{2-6}\text{alkylNR}^m\text{R}^m$ ,  $\text{-C(=O)R}^s$ ,  $\text{-C(=O)OR}^s$ ,  $\text{-C(=O)NR}^m\text{R}^s$ ,  $\text{-C(=NR}^m)\text{NR}^m\text{R}^s$ ,  
 $\text{-OR}^s$ ,  $\text{-OC(=O)R}^s$ ,  $\text{-OC(=O)NR}^m\text{R}^s$ ,  $\text{-OC(=O)N}(\text{R}^m)\text{S}(=\text{O})_2\text{R}^s$ ,  $\text{-OC}_{2-6}\text{alkylNR}^m\text{R}^s$ ,  
 $\text{-OC}_{2-6}\text{alkylOR}^s$ ,  $\text{-SR}^s$ ,  $\text{-S(=O)R}^s$ ,  $\text{-S(=O)}_2\text{R}^s$ ,  $\text{-S(=O)}_2\text{NR}^m\text{R}^s$ ,  
 $\text{-S(=O)}_2\text{N}(\text{R}^m)\text{C(=O)R}^s$ ,  $\text{-S(=O)}_2\text{N}(\text{R}^m)\text{C(=O)OR}^s$ ,  $\text{-S(=O)}_2\text{N}(\text{R}^m)\text{C(=O)NR}^m\text{R}^s$ ,  
 $\text{-NR}^m\text{R}^s$ ,  $\text{-N}(\text{R}^m)\text{C(=O)R}^s$ ,  $\text{-N}(\text{R}^m)\text{C(=O)OR}^s$ ,  $\text{-N}(\text{R}^m)\text{C(=O)NR}^m\text{R}^s$ ,  
20    $\text{-N}(\text{R}^m)\text{C(=NR}^m)\text{NR}^m\text{R}^s$ ,  $\text{-N}(\text{R}^m)\text{S}(=\text{O})_2\text{R}^s$ ,  $\text{-N}(\text{R}^m)\text{S}(=\text{O})_2\text{NR}^m\text{R}^s$ ,  
 $\text{-NR}^m\text{C}_{2-6}\text{alkylNR}^m\text{R}^s$ ,  $\text{-NR}^m\text{C}_{2-6}\text{alkylOR}^s$  and  $\text{-NR}^m\text{C}_{2-6}\text{alkylOR}^m$ , and the ring  
and bridge carbon atoms are substituted with 0, 1 or 2  $=\text{O}$  groups;

$\text{R}^7$  is  $\text{C}_{2-8}\text{alkyl}$ ,  $\text{C}_{1-5}\text{haloalkyl}$ , I, Br;

$\text{R}^9$  is independently, at each instance, H,  $\text{C}_{1-9}\text{alkyl}$ ,  $\text{C}_{1-4}\text{haloalkyl}$ , halo,

25   nitro, cyano,  $\text{-OC}_{1-6}\text{alkyl}$ ,  $\text{-O-C}_{1-4}\text{haloalkyl}$ ,  $\text{-O-C}_{1-6}\text{alkylNR}^m\text{R}^m$ ,  
 $\text{-O-C}_{1-6}\text{alkylOR}^m$ ,  $\text{-NR}^m\text{R}^m$ ,  $\text{-NR}^m\text{-C}_{1-4}\text{haloalkyl}$ ,  $\text{-NR}^m\text{-C}_{1-6}\text{alkylNR}^m\text{R}^m$  or  
 $\text{-NR}^m\text{-C}_{1-6}\text{alkylOR}^m$ ;

Y is NH; and

Z is  $\text{CR}^8$  or N.

30

152. A compound according to Claim 151, wherein  $\text{R}^2$  is  $\text{C}_{1-6}\text{alkyl}$  substituted by 1, 2 or 3 substituents selected from  $\text{C}_{1-4}\text{haloalkyl}$ , halo, cyano,

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nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>,  
 -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>,  
 -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,  
 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,  
 5 -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,  
 -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,  
 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>;

153. A compound according to Claim 151, wherein R<sup>2</sup> is  
 10 -(C(R<sup>q</sup>)<sub>2</sub>)<sub>o</sub>phenyl, wherein the phenyl is substituted by 0, 1, 2 or 3 substituents  
 independently selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro,  
 -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>,  
 -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>,  
 -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>,  
 15 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>,  
 -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,  
 -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,  
 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>,  
 -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>,  
 20 -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>,  
 -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>,  
 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>,  
 -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>,  
 -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and C<sub>1-4</sub>alkyl  
 25 substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro,  
 -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>,  
 -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>,  
 -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>,  
 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>,  
 30 -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,  
 -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,  
 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,

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-OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>,  
 -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,  
 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,  
 -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,  
 5 -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,  
 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>.

154. A compound according to Claim 151, wherein R<sup>2</sup> is -(C(R<sup>q</sup>)<sub>2</sub>)<sub>0</sub>R<sup>r</sup>,  
 wherein R<sup>r</sup> is a saturated or unsaturated 5- or 6-membered ring heterocycle  
 10 containing 1, 2 or 3 heteroatoms independently selected from N, O and S, wherein  
 no more than 2 of the ring members are O or S, wherein the heterocycle is  
 optionally fused with a phenyl ring, and the heterocycle or fused phenyl ring is  
 substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>,  
 15 -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>,  
 -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>,  
 -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>,  
 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>,  
 -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>,  
 20 -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>,  
 -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>,  
 -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>,  
 -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>,  
 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>,  
 25 -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,  
 -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup>  
 and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo,  
 cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>,  
 -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>,  
 30 -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,  
 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,  
 -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,

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$\text{-N}(\text{R}^m)\text{C}(=\text{NR}^m)\text{NR}^m\text{R}^m$ ,  $\text{-N}(\text{R}^m)\text{S}(=\text{O})_2\text{R}^n$ ,  $\text{-N}(\text{R}^m)\text{S}(=\text{O})_2\text{NR}^m\text{R}^m$ ,  
 $\text{-NR}^m\text{C}_{2-6}\text{alkylNR}^m\text{R}^m$ ,  $\text{-C}(=\text{O})\text{R}^s$ ,  $\text{-C}(=\text{O})\text{OR}^s$ ,  $\text{-C}(=\text{O})\text{NR}^m\text{R}^s$ ,  $\text{-C}(=\text{NR}^m)\text{NR}^m\text{R}^s$ ,  
 $\text{-OR}^s$ ,  $\text{-OC}(=\text{O})\text{R}^s$ ,  $\text{-OC}(=\text{O})\text{NR}^m\text{R}^s$ ,  $\text{-OC}(=\text{O})\text{N}(\text{R}^m)\text{S}(=\text{O})_2\text{R}^s$ ,  $\text{-OC}_{2-6}\text{alkylNR}^m\text{R}^s$ ,  
 $\text{-OC}_{2-6}\text{alkylOR}^s$ ,  $\text{-SR}^s$ ,  $\text{-S}(=\text{O})\text{R}^s$ ,  $\text{-S}(=\text{O})_2\text{R}^s$ ,  $\text{-S}(=\text{O})_2\text{NR}^m\text{R}^s$ ,  
5     $\text{-S}(=\text{O})_2\text{N}(\text{R}^m)\text{C}(=\text{O})\text{R}^s$ ,  $\text{-S}(=\text{O})_2\text{N}(\text{R}^m)\text{C}(=\text{O})\text{OR}^s$ ,  $\text{-S}(=\text{O})_2\text{N}(\text{R}^m)\text{C}(=\text{O})\text{NR}^m\text{R}^s$ ,  
 $\text{-NR}^m\text{R}^s$ ,  $\text{-N}(\text{R}^m)\text{C}(=\text{O})\text{R}^s$ ,  $\text{-N}(\text{R}^m)\text{C}(=\text{O})\text{OR}^s$ ,  $\text{-N}(\text{R}^m)\text{C}(=\text{O})\text{NR}^m\text{R}^s$ ,  
 $\text{-N}(\text{R}^m)\text{C}(=\text{NR}^m)\text{NR}^m\text{R}^s$ ,  $\text{-N}(\text{R}^m)\text{S}(=\text{O})_2\text{R}^s$ ,  $\text{-N}(\text{R}^m)\text{S}(=\text{O})_2\text{NR}^m\text{R}^s$ ,  
 $\text{-NR}^m\text{C}_{2-6}\text{alkylNR}^m\text{R}^s$ ,  $\text{-NR}^m\text{C}_{2-6}\text{alkylOR}^s$  and  $\text{-NR}^m\text{C}_{2-6}\text{alkylOR}^m$ ;

10       155. A compound according to Claim 151, wherein  $\text{R}^4$  is a phenyl ring  
that is vicinally fused with a saturated or unsaturated 3- or 4-atom bridge  
containing 0, 1, 2 or 3 atoms selected from O, N and S with the remaining atoms  
being carbon, so long as the combination of O and S atoms is not greater than 2,  
wherein the ring and bridge are substituted by 0, 1, 2 or 3 substituents  
15    independently selected from  $\text{C}_{1-8}\text{alkyl}$ ,  $\text{C}_{1-4}\text{haloalkyl}$ , halo, cyano, nitro,  
 $\text{-C}(=\text{O})\text{R}^n$ ,  $\text{-C}(=\text{O})\text{OR}^n$ ,  $\text{-C}(=\text{O})\text{NR}^m\text{R}^m$ ,  $\text{-C}(=\text{NR}^m)\text{NR}^m\text{R}^m$ ,  $\text{-OR}^m$ ,  $\text{-OC}(=\text{O})\text{R}^n$ ,  
 $\text{-OC}(=\text{O})\text{NR}^m\text{R}^m$ ,  $\text{-OC}(=\text{O})\text{N}(\text{R}^m)\text{S}(=\text{O})_2\text{R}^n$ ,  $\text{-OC}_{2-6}\text{alkylNR}^m\text{R}^m$ ,  $\text{-OC}_{2-6}\text{alkylOR}^m$ ,  
 $\text{-SR}^m$ ,  $\text{-S}(=\text{O})\text{R}^n$ ,  $\text{-S}(=\text{O})_2\text{R}^n$ ,  $\text{-S}(=\text{O})_2\text{NR}^m\text{R}^m$ ,  $\text{-S}(=\text{O})_2\text{N}(\text{R}^m)\text{C}(=\text{O})\text{R}^n$ ,  
 $\text{-S}(=\text{O})_2\text{N}(\text{R}^m)\text{C}(=\text{O})\text{OR}^n$ ,  $\text{-S}(=\text{O})_2\text{N}(\text{R}^m)\text{C}(=\text{O})\text{NR}^m\text{R}^m$ ,  $\text{-NR}^m\text{R}^m$ ,  
20     $\text{-N}(\text{R}^m)\text{C}(=\text{O})\text{R}^n$ ,  $\text{-N}(\text{R}^m)\text{C}(=\text{O})\text{OR}^n$ ,  $\text{-N}(\text{R}^m)\text{C}(=\text{O})\text{NR}^m\text{R}^m$ ,  
 $\text{-N}(\text{R}^m)\text{C}(=\text{NR}^m)\text{NR}^m\text{R}^m$ ,  $\text{-N}(\text{R}^m)\text{S}(=\text{O})_2\text{R}^n$ ,  $\text{-N}(\text{R}^m)\text{S}(=\text{O})_2\text{NR}^m\text{R}^m$ ,  
 $\text{-NR}^m\text{C}_{2-6}\text{alkylNR}^m\text{R}^m$ ,  $\text{-NR}^m\text{C}_{2-6}\text{alkylOR}^m$ ,  $\text{-C}(=\text{O})\text{R}^s$ ,  $\text{-C}(=\text{O})\text{OR}^s$ ,  
 $\text{-C}(=\text{O})\text{NR}^m\text{R}^s$ ,  $\text{-C}(=\text{NR}^m)\text{NR}^m\text{R}^s$ ,  $\text{-OR}^s$ ,  $\text{-OC}(=\text{O})\text{R}^s$ ,  $\text{-OC}(=\text{O})\text{NR}^m\text{R}^s$ ,  
 $\text{-OC}(=\text{O})\text{N}(\text{R}^m)\text{S}(=\text{O})_2\text{R}^s$ ,  $\text{-OC}_{2-6}\text{alkylNR}^m\text{R}^s$ ,  $\text{-OC}_{2-6}\text{alkylOR}^s$ ,  $\text{-SR}^s$ ,  $\text{-S}(=\text{O})\text{R}^s$ ,  
25     $\text{-S}(=\text{O})_2\text{R}^s$ ,  $\text{-S}(=\text{O})_2\text{NR}^m\text{R}^s$ ,  $\text{-S}(=\text{O})_2\text{N}(\text{R}^m)\text{C}(=\text{O})\text{R}^s$ ,  $\text{-S}(=\text{O})_2\text{N}(\text{R}^m)\text{C}(=\text{O})\text{OR}^s$ ,  
 $\text{-S}(=\text{O})_2\text{N}(\text{R}^m)\text{C}(=\text{O})\text{NR}^m\text{R}^s$ ,  $\text{-NR}^m\text{R}^s$ ,  $\text{-N}(\text{R}^m)\text{C}(=\text{O})\text{R}^s$ ,  $\text{-N}(\text{R}^m)\text{C}(=\text{O})\text{OR}^s$ ,  
 $\text{-N}(\text{R}^m)\text{C}(=\text{O})\text{NR}^m\text{R}^s$ ,  $\text{-N}(\text{R}^m)\text{C}(=\text{NR}^m)\text{NR}^m\text{R}^s$ ,  $\text{-N}(\text{R}^m)\text{S}(=\text{O})_2\text{R}^s$ ,  
 $\text{-N}(\text{R}^m)\text{S}(=\text{O})_2\text{NR}^m\text{R}^s$ ,  $\text{-NR}^m\text{C}_{2-6}\text{alkylNR}^m\text{R}^s$ ,  $\text{-NR}^m\text{C}_{2-6}\text{alkylOR}^s$  and  $\text{C}_{1-4}\text{alkyl}$   
substituted by 1 or 2 groups selected from  $\text{C}_{1-2}\text{haloalkyl}$ , halo, cyano, nitro,  
30     $\text{-C}(=\text{O})\text{R}^n$ ,  $\text{-C}(=\text{O})\text{OR}^n$ ,  $\text{-C}(=\text{O})\text{NR}^m\text{R}^m$ ,  $\text{-C}(=\text{NR}^m)\text{NR}^m\text{R}^m$ ,  $\text{-OR}^m$ ,  $\text{-OC}(=\text{O})\text{R}^n$ ,  
 $\text{-OC}(=\text{O})\text{NR}^m\text{R}^m$ ,  $\text{-OC}(=\text{O})\text{N}(\text{R}^m)\text{S}(=\text{O})_2\text{R}^n$ ,  $\text{-OC}_{2-6}\text{alkylNR}^m\text{R}^m$ ,  $\text{-OC}_{2-6}\text{alkylOR}^m$ ,  
 $\text{-SR}^m$ ,  $\text{-S}(=\text{O})\text{R}^n$ ,  $\text{-S}(=\text{O})_2\text{R}^n$ ,  $\text{-S}(=\text{O})_2\text{NR}^m\text{R}^m$ ,  $\text{-S}(=\text{O})_2\text{N}(\text{R}^m)\text{C}(=\text{O})\text{R}^n$ ,

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-S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>,  
 -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,  
 -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,  
 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; and the bridge carbon atoms are  
 5 substituted with 0, 1 or 2 =O groups.

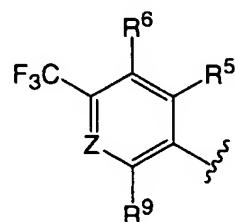
156. A compound according to Claim 151, wherein R<sup>7</sup> is tert-butyl or trifluoromethyl.

10 157. A compound according to Claim 151, wherein R<sup>9</sup> is H.

158. A compound according to Claim 151, wherein Z is CR<sup>8</sup>.

159. A compound according to Claim 151, wherein Z is N.

15 160. A compound according to Claim 122, wherein:  
 R<sup>1</sup> is



R<sup>2</sup> is H, -OR<sup>m</sup>, Cl, C<sub>1-3</sub>haloalkyl or C<sub>1-6</sub>alkyl;

20 R<sup>4</sup> is a saturated or unsaturated 5- or 6-membered ring containing 0, 1, 2 or 3 atoms selected from O, N and S, so long as the combination of O and S atoms is not greater than 2, wherein the ring is substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>n</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>,

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- N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>,
- C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>,
- OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>,
- SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>,
- 5 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>,
- N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,
- N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup>
- and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo,
- cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>,
- 10 -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>,
- SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>,
- N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- 15 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; wherein R<sup>4</sup> is not unsubstituted phenyl;

R<sup>9</sup> is independently, at each instance, H, C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OC<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>;

Y is NH; and

Z is CR<sup>8</sup> or N.

161. A compound according to Claim 160, wherein R<sup>4</sup> is a saturated or unsaturated 5- or 6-membered ring containing 1, 2 or 3 atoms selected from O, N and S, so long as the combination of O and S atoms is not greater than 1, wherein the ring is substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>n</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>,

25 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>,

-N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,

30 -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,

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-N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,  
 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>,  
 -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>,  
 -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>,  
 5 -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>,  
 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>,  
 -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>,  
 -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and C<sub>1-4</sub>alkyl  
 substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro,  
 10 -C(=O)R<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>,  
 -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>,  
 -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>,  
 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>,  
 -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,  
 15 -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,  
 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>;

162. A compound according to Claim 160, wherein Z is CR<sup>8</sup>.

20 163. A compound according to Claim 160, wherein Z is N.

164. A compound according to Claim 1, or a pharmaceutically-  
 acceptable salt thereof, wherein the compounds is selected from:  
 (2E)-3-[4-(tert-butyl)phenyl]-N-phenylprop-2-enamide,  
 25 (2E)-N-(3,4-dimethoxyphenyl)-3-[4-(tert-butyl)phenyl]prop-2-enamide,  
 (2E)-3-[4-(tert-butyl)phenyl]-N-(4-hydroxy-3-methoxyphenyl)prop-2-enamide,  
 (2E)-3-[4-(tert-butyl)phenyl]-N-(2-5,6,7,8-tetrahydronaphthyl)prop-2-enamide,  
 (2E)-N-(2H,3H,4H-benzo[3,4-e]1,4-oxazaperhydroin-6-yl)-3-[4-(tert-  
 butyl)phenyl]prop-2-enamide,  
 30 (2E)-3-[4-(tert-butyl)phenyl]-N-(3-oxo(2H,4H-benzo[3,4-e]1,4-oxazaperhydroin-  
 6-yl))prop-2-enamide,

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(2E)-3-[4-(tert-butyl)phenyl]-N-(4-methyl-3-oxo(2H-benzo[3,4-e]1,4-oxazaperhydroin-6-yl))prop-2-enamide,

(2E)-3-[4-(tert-butyl)phenyl]-N-(4-methyl(2H,3H-benzo[3,4-e]1,4-oxazaperhydroin-6-yl))prop-2-enamide,

5 (2E)-3-[4-(tert-butyl)phenyl]-N-(3-oxo(2H,4H-benzo[e]1,4-oxazaperhydroin-7-yl))prop-2-enamide,

(2E)-N-(2H,3H,4H-benzo[e]1,4-oxazaperhydroin-7-yl)-3-[4-(tert-butyl)phenyl]prop-2-enamide,

(2E)-3-[4-(tert-butyl)phenyl]-N-(4-methyl-3-oxo(2H-benzo[e]1,4-oxazaperhydroin-7-yl))prop-2-enamide,

10 (2E)-3-[4-(tert-butyl)phenyl]-N-(4-methyl(2H,3H-benzo[e]1,4-oxazaperhydroin-7-yl))prop-2-enamide,

(2E)-3-[4-(tert-butyl)phenyl]-N-(4-methyl(2H,3H-benzo[e]1,4-oxazaperhydroin-7-yl))prop-2-enamide,

ethyl 6-{(2E)-3-[4-(tert-butyl)phenyl]prop-2-enoylamino}-2H,3H,4H-benzo[e]1,4-oxazaperhydroine-2-carboxylate,

15 (2E)-3-[4-(tert-butyl)phenyl]-N-[2-(hydroxymethyl)(2H,3H,4H-benzo[3,4-e]1,4-oxazaperhydroin-6-yl)]prop-2-enamide,

(2E)-N-[(3S)-3-(hydroxymethyl)(2H,3H-benzo[e]1,4-dioxan-6-yl)]-3-[4-(tert-butyl)phenyl]prop-2-enamide,

(2E)-N-[(3R)-3-(hydroxymethyl)(2H,3H-benzo[e]1,4-dioxan-6-yl)]-3-[4-(tert-butyl)phenyl]prop-2-enamide,

20 (2E)-N-[(2R)-2-(hydroxymethyl)(2H,3H-benzo[3,4-e]1,4-dioxan-6-yl)]-3-[4-(tert-butyl)phenyl]prop-2-enamide,

(2E)-N-[(2S)-2-(hydroxymethyl)(2H,3H-benzo[3,4-e]1,4-dioxan-6-yl)]-3-[4-(tert-butyl)phenyl]prop-2-enamide,

25 (2E)-3-[4-(tert-butyl)phenyl]-N-(7-1,2,3,4-tetrahydroquinolyl)prop-2-enamide,

(2E)-3-[4-(tert-butyl)phenyl]-N-(1-methyl(7-1,2,3,4-tetrahydroquinolyl))prop-2-enamide,

30 (2E)-3-[4-(tert-butyl)phenyl]-N-(3-hydroxyphenyl)prop-2-enamide,

2-(3-{(2E)-3-[4-(tert-butyl)phenyl]prop-2-enoylamino}phenoxy)acetic acid,

(2E)-3-[4-(tert-butyl)phenyl]-N-[3-(2-hydroxyethoxy)phenyl]prop-2-enamide,

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(2E)-3-[4-(tert-butyl)phenyl]-N-[3-(2-methoxyethoxy)phenyl]prop-2-enamide,  
(2E)-3-[4-(tert-butyl)phenyl]-N-{3-[2-(1,3-dioxobenzo[c]azolin-2-  
yl)ethoxy]phenyl}prop-2-enamide,  
(2E)-N-[3-(2-Aminoethoxy)phenyl]-3-[4-(tert-butyl)phenyl]prop-2-enamide,  
5 (2E)-3-[4-(tert-butyl)phenyl]-N-indolin-6-ylprop-2-enamide,  
(2E)-3-[4-(tert-butyl)phenyl]-N-(1-methylindolin-6-yl)prop-2-enamide,  
(2E)-N-(1-Acetyl-3,3-dimethylindolin-6-yl)-3-[4-(tert-butyl)phenyl]prop-2-  
enamide,  
(2E)-3-[4-(tert-butyl)phenyl]-N-(1,3,3-trimethylindolin-6-yl)prop-2-enamide,  
10 (2E)-3-[4-(tert-butyl)phenyl]-N-(1-methylindol-6-yl)prop-2-enamide,  
(2E)-3-[4-(tert-butyl)phenyl]-N-(1-methylindol-5-yl)prop-2-enamide,  
(2E)-3-[4-(tert-butyl)phenyl]-N-(1-methylindolin-5-yl)prop-2-enamide,  
(2E)-N-benzoxazol-5-yl-3-[4-(tert-butyl)phenyl]prop-2-enamide,  
(2E)-N-benzoxazol-6-yl-3-[4-(tert-butyl)phenyl]prop-2-enamide,  
15 (2E)-N-benzo[b]furan-5-yl-3-[4-(tert-butyl)phenyl]prop-2-enamide,  
(2E)-3-[4-(tert-butyl)phenyl]-N-(2,3-dihydrobenzo[b]furan-5-yl)prop-2-enamide,  
N-(2H,3H-benzo[3,4-e]1,4-dioxan-6-yl)-3,3-bis(4-methylphenyl)prop-2-enamide,  
(2E)-N-(2H,3H-benzo[3,4-e]1,4-dioxan-6-yl)-3-[4-(tert-butyl)phenyl]-2-  
methylprop-2-enamide,  
20 (2E)-N-(2H,3H-benzo[3,4-e]1,4-dioxan-6-yl)-3-[4-(tert-butyl)phenyl]-2-  
ethylprop-2-enamide,  
(2E)-N-(2H,3H-benzo[3,4-e]1,4-dioxan-6-yl)-3-(4-cyclopropylphenyl)prop-2-  
enamide,  
(2E)-N-(2H,3H-benzo[3,4-e]1,4-dioxan-6-yl)-3-[6-(tert-butyl)(3-pyridyl)]prop-2-  
25 enamide,  
(2E)-N-(2H,3H-benzo[3,4-e]1,4-dioxan-6-yl)-3-[3-(tert-butyl)phenyl]prop-2-  
enamide,  
(2E)-N-(2H,3H-benzo[3,4-e]1,4-dioxan-6-yl)-3-[2-fluoro-4-(trifluoromethyl)-  
phenyl]prop-2-enamide,  
30 (2E)-N-(2H,3H-benzo[3,4-e]1,4-dioxan-6-yl)-3-[2,3-difluoro-4-(trifluoromethyl)-  
phenyl]prop-2-enamide,

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(2E)-N-(2H,3H-benzo[3,4-e]1,4-dioxan-6-yl)-3-[2,4-bis(trifluoromethyl)-phenyl]prop-2-enamide,

(2E)-3-[2-fluoro-4-(trifluoromethyl)phenyl]-N-indol-5-ylprop-2-enamide,

(2E)-3-[2,3-difluoro-4-(trifluoromethyl)phenyl]-N-indol-5-ylprop-2-enamide,

5 (2E)-3-[2,4-bis(trifluoromethyl)phenyl]-N-indol-5-ylprop-2-enamide,

N-(2H,3H-benzo[e]1,4-dioxan-6-yl)(2Z)-3-[4-(tert-butyl)phenyl]-3-[4-(trifluoromethyl)phenyl]prop-2-enamide,

(2E)-N-(2H,3H-benzo[e]1,4-dioxan-6-yl)-3-[4-(tert-butyl)phenyl]-4-phenylbut-2-enamide,

10 (2E)-N-(2H,3H-benzo[e]1,4-dioxan-6-yl)-3-[4-(tert-butyl)phenyl]-5-methylhex-2-enamide,

N-(2H,3H-benzo[e]1,4-dioxan-6-yl)(2Z)-3-[4-(tert-butyl)phenyl]-3-iodoprop-2-enamide,

(2E)-N-(2H,3H-benzo[e]1,4-dioxan-6-yl)-3-(3-aminophenyl)-3-[4-(tert-butyl)phenyl]prop-2-enamide,

15 ethyl (4E)-5-(N-(2H,3H-benzo[e]1,4-dioxan-6-yl)carbamoyl)-4-[4-(tert-butyl)phenyl]pent-4-enoate,

3-methoxyphenyl (2E)-3-[4-(tert-butyl)phenyl]prop-2-enoate,

N-(2H,3H-benzo[3,4-e]1,4-dioxan-6-yl)(2Z)-3-[4-(tert-butyl)phenyl]-3-

20 hydroxyprop-2-enamide,

N-(2H,3H-benzo[3,4-e]1,4-dioxan-6-yl)[7-(tert-butyl)(3-isoquinolyl)]-carboxamide,

N-(2H,3H-benzo[3,4-e]1,4-dioxan-6-yl)(2Z)-3-[4-(tert-butyl)phenyl]prop-2-enamide,

25 N-(2H,3H-benzo[e]1,4-dioxan-6-yl)(2Z)-3-[4-(tert-butyl)phenyl]-3-phenylprop-2-enamide,

(2E)-N-(2H,3H-benzo[e]1,4-dioxan-6-yl)-3-[4-(tert-butyl)phenyl]-3-phenylprop-2-enamide,

(2E)-3-[4-(tert-butyl)phenyl]-N-[1-(N-methylcarbamoyl)(1H-indazol-6-yl)]prop-

30 2-enamide,

(2E)-3-[4-(tert-butyl)phenyl]-N-{4-chloro-3-[(methylamino)carbonylamino]-phenyl}prop-2-enamide,

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(2E)-3-[4-(tert-butyl)phenyl]-N-quinoxalin-6-ylprop-2-enamide,  
(2E)-N-(1-acetyl(7-1,2,3,4-tetrahydroquinolyl))-3-[4-(tert-butyl)phenyl]prop-2-enamide,  
(2E)-3-[4-(tert-butyl)phenyl]-N-[1-(2-methoxyethyl)indol-6-yl]prop-2-enamide,  
5 (2E)-3-[4-(tert-butyl)phenyl]-N-[1-(2-methoxyethyl)indol-5-yl]prop-2-enamide,  
(2E)-3-[4-(tert-butyl)phenyl]-N-[1-(2-hydroxyethyl)indol-6-yl]prop-2-enamide,  
(2E)-3-[4-(tert-butyl)phenyl]-N-[1-(2-hydroxyethyl)indol-5-yl]prop-2-enamide,  
(2E)-3-[4-(tert-butyl)phenyl]-N-[2-(hydroxymethyl)indol-5-yl]prop-2-enamide,  
(2E)-N-(2H,3H-benzo[3,4-e]1,4-dioxan-6-yl)-3-[6-(tert-butyl)-2-methyl(3-  
10 pyridyl)]prop-2-enamide,  
(2E)-3-[6-(tert-butyl)-2-methyl(3-pyridyl)]-N-indol-6-ylprop-2-enamide,  
(2E)-N-benzothiazol-6-yl-3-[6-(tert-butyl)-2-methyl(3-pyridyl)]prop-2-enamide,  
(2E)-3-[6-(tert-butyl)-2-methyl(3-pyridyl)]-N-indol-5-ylprop-2-enamide,  
15 (2E)-3-[6-(tert-butyl)-2-methyl(3-pyridyl)]-N-[2-(hydroxymethyl)indol-5-yl]prop-  
2-enamide,  
(2E)-3-[6-(tert-butyl)(3-pyridyl)]-N-[2-(hydroxymethyl)indol-5-yl]prop-2-  
enamide,  
(2E)-3-[6-(tert-butyl)(3-pyridyl)]-N-[1-(2-hydroxyethyl)indol-5-yl]prop-2-  
enamide,  
20 (2E)-N-indol-6-yl-3-[2-methyl-6-(trifluoromethyl)(3-pyridyl)]prop-2-enamide,  
(2E)-N-indol-5-yl-3-[2-methyl-6-(trifluoromethyl)(3-pyridyl)]prop-2-enamide,  
(2E)-N-benzothiazol-6-yl-3-[2-methyl-6-(trifluoromethyl)(3-pyridyl)]prop-2-  
enamide,  
(2E)-N-(2H,3H-benzo[3,4-e]1,4-dioxan-6-yl)-3-[2-methyl-6-(trifluoromethyl)(3-  
25 pyridyl)]prop-2-enamide,  
(2E)-3-[4-(tert-butyl)phenyl]-N-[3-(hydroxymethyl)-2-oxo(7-1,3,4-  
trihydroquinolyl)]prop-2-enamide,  
(2E)-N-[3-(hydroxymethyl)(7-1,2,3,4-tetrahydroquinolyl)]-3-[4-  
trifluoromethyl)phenyl]prop-2-enamide,  
30 (2E)-N-[3-(hydroxymethyl)-1-methyl(7-1,2,3,4-tetrahydroquinolyl)]-3-[4-  
trifluoromethyl)phenyl]prop-2-enamide,

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(2E)-N-(2H,3H-benzo[e]1,4-dioxan-6-yl)-3-[4-(tert-butyl)phenyl]-5-(1,3-dioxolan-2-yl)pent-2-enamide,

(2E)-N-(2H,3H-benzo[e]1,4-dioxan-6-yl)-3-[4-(tert-butyl)phenyl]-4-(3-pyridyl)but-2-enamide,

5 N-(2H,3H-benzo[e]1,4-dioxan-6-yl)(2Z)-3-[4-(tert-butyl)phenyl]-4-pyrrolidinylbut-2-enamide,

(2E)-N-(2H,3H-benzo[e]1,4-dioxan-6-yl)-3-[4-(tert-butyl)phenyl]-6-imidazolylhex-2-enamide,

3-(4-tert-butyl-phenyl)-6-imidazol-1-yl-hex-2-enoic acid benzothiazol-6-ylamide,

10 (2E)-N-(2H,3H-benzo[e]1,4-dioxan-6-yl)-3-[2-morpholin-4-yl-6-(trifluoromethyl)(3-pyridyl)]prop-2-enamide,

(2E)-N-(2H,3H-benzo[e]1,4-dioxan-6-yl)-3-[4-(tert-butyl)-2-bromophenyl]prop-2-enamide,

ethoxy 2-[(1E)-2-(N-(2H,3H-benzo[e]1,4-dioxan-6-yl)carbamoyl)vinyl]-5-(tert-butyl)benzoate,

15 (2E)-3-[2-Bromo-4-(trifluoromethyl)phenyl]-N-indol-5-ylprop-2-enamide,

(2E)-N-benzothiazol-6-yl-3-[2-bromo-4-(trifluoromethyl)phenyl]prop-2-enamide,

(2E)-N-(2H,3H-benzo[e]1,4-dioxan-6-yl)-3-[2-bromo-4-(trifluoromethyl)-phenyl]prop-2-enamide,

20 (2E)-N-indol-5-yl-3-[2-(6-methoxy(3-pyridyl))-4-(trifluoromethyl)phenyl]prop-2-enamide,

(2E)-N-indol-5-yl-3-[2-(4-pyridyl)-4-(trifluoromethyl)phenyl]prop-2-enamide,

(2E)-N-indol-5-yl-3-[2-(3-pyridyl)-4-(trifluoromethyl)phenyl]prop-2-enamide,

tert-butyl 4-{2-[(1E)-2-(N-indol-5-ylcarbamoyl)vinyl]-5-(trifluoromethyl)phenyl}-1,2,5,6-tetrahydropyridinecarboxylate,

25 (2E)-N-indol-5-yl-3-[2-(1,3-thiazol-2-yl)-4-(trifluoromethyl)phenyl]prop-2-enamide,

(2E)-N-indol-5-yl-3-[2-(3-pyridylmethyl)-4-(trifluoromethyl)phenyl]prop-2-enamide,

30 (2E)-3-[2-(3-pyridyl)-4-(trifluoromethyl)phenyl]-N-(7-quinolyl)prop-2-enamide,

(2E)-3-[2-(3-pyridyl)-4-(trifluoromethyl)phenyl]-N-(3-quinolyl)prop-2-enamide,

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(2E)-N-indol-6-yl-3-[2-(3-pyridyl)-4-(trifluoromethyl)phenyl]prop-2-enamide,  
and

N-(2H,3H-benzo[3,4-e]1,4-dioxan-6-yl)-3-[4-(tert-butyl)phenyl]propanamide.

5        165. A compound according to Claim 21, or a pharmaceutically-  
acceptable salt thereof, wherein the compounds is selected from:

(4-benzo[1,3]dioxol-5-yl-pyridin-2-yl)-(2,3-dihydro-benzo[1,4]dioxin-6-yl)-  
amine,

10      (2,3-dihydro-benzo[1,4]dioxin-6-yl)-[4-(4-dimethylamino-phenyl)-pyridin-2-yl]-  
amine,

(2,3-dihydro-benzo[1,4]dioxin-6-yl)-[4-(4-fluoro-phenyl)-pyridin-2-yl]-amine,

(2,3-dihydro-benzo[1,4]dioxin-6-yl)-[4-(3-trifluoromethyl-phenyl)-pyridin-2-yl]-  
amine,

15      (4-benzo[b]thiophen-2-yl-pyridin-2-yl)-(2,3-dihydro-benzo[1,4]dioxin-6-yl)-  
amine,

1-{4-[2-(2,3-dihydro-benzo[1,4]dioxin-6-ylamino)-pyridin-4-yl]-phenyl}-  
ethanone,

1-{4-[2-(2,3-dihydro-benzo[1,4]dioxin-6-ylamino)-pyridin-4-yl]-phenyl}-ethanol,  
[4-(3,5-bis-trifluoromethyl-phenyl)-pyridin-2-yl]-(2,3-dihydro-benzo[1,4]dioxin-  
6-yl)-amine,

(2,3-dihydro-benzo[1,4]dioxin-6-yl)-[4-(4-trifluoromethoxy-phenyl)-pyridin-2-  
yl]-amine, and

quinolin-3-yl- [4-(4-trifluoromethyl-phenyl)-pyridin-2-yl]-amine.

25      166. A compound according to Claim 56, or a pharmaceutically-  
acceptable salt thereof, wherein the compounds is selected from:

7-[4-(4-trifluoromethyl-phenyl)-pyridin-2-yloxy]-quinoline,

2-(3-methoxy-phenoxy)-4-(4-trifluoromethyl-phenyl)-pyridine,

8-[4-(4-trifluoromethyl-phenyl)-pyridin-2-yloxy]-quinolin-2-ylamine,

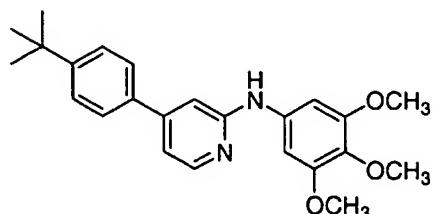
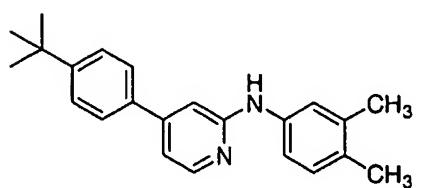
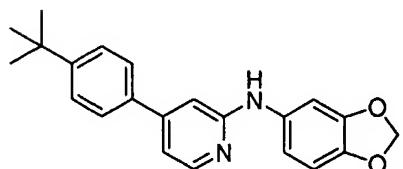
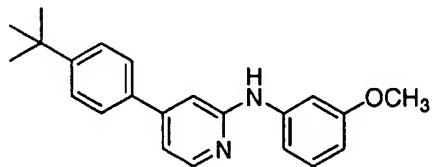
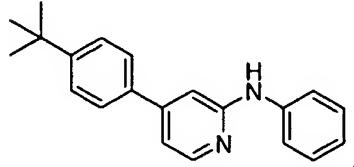
30      4-[4-(4-trifluoromethyl-phenyl)-pyridin-2-yloxy]-benzothiazol-2-ylamine,

N-{4-[4-(4-trifluoromethyl-phenyl)-pyridin-2-yloxy]-benzothiazol-2-yl}-  
acetamide,

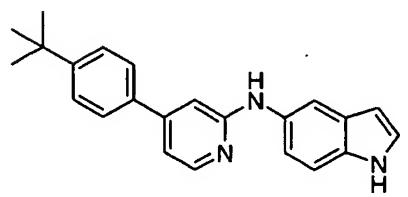
- 553 -

8-[4-(4-trifluoromethyl-phenyl)-pyridin-2-yloxy]-quinoline, and  
2-methyl-5-[4-(4-trifluoromethyl-phenyl)-pyridin-2-yloxy]-benzothiazole.

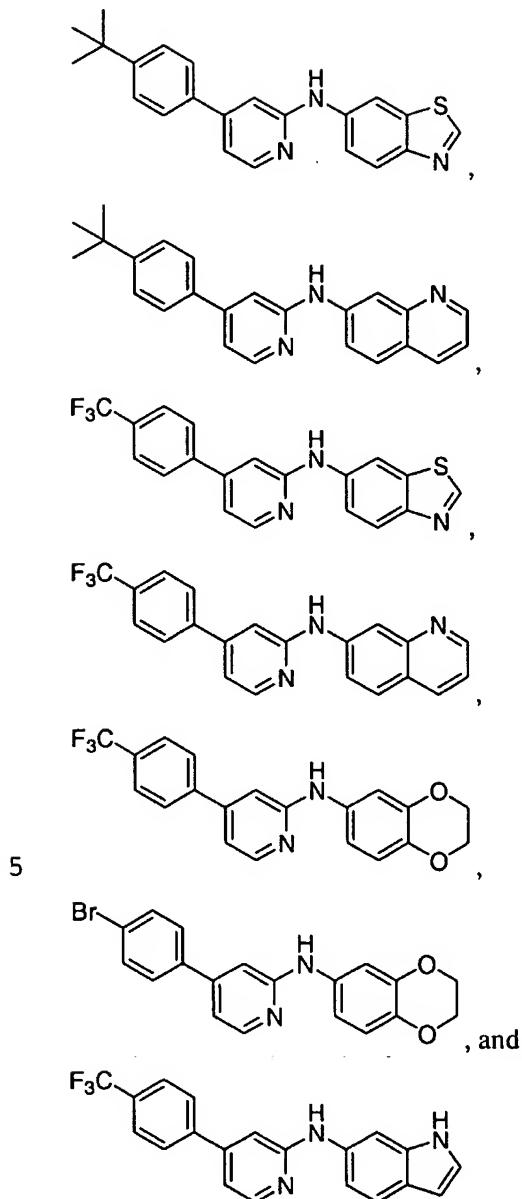
167. A compound according to Claim 21, or a pharmaceutically-  
5 acceptable salt thereof, wherein the compounds is selected from:



10



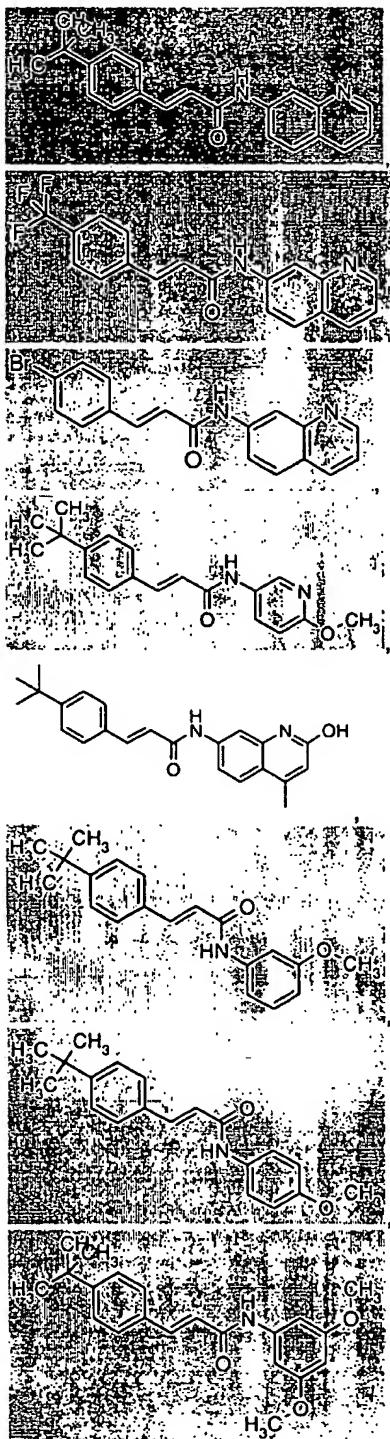
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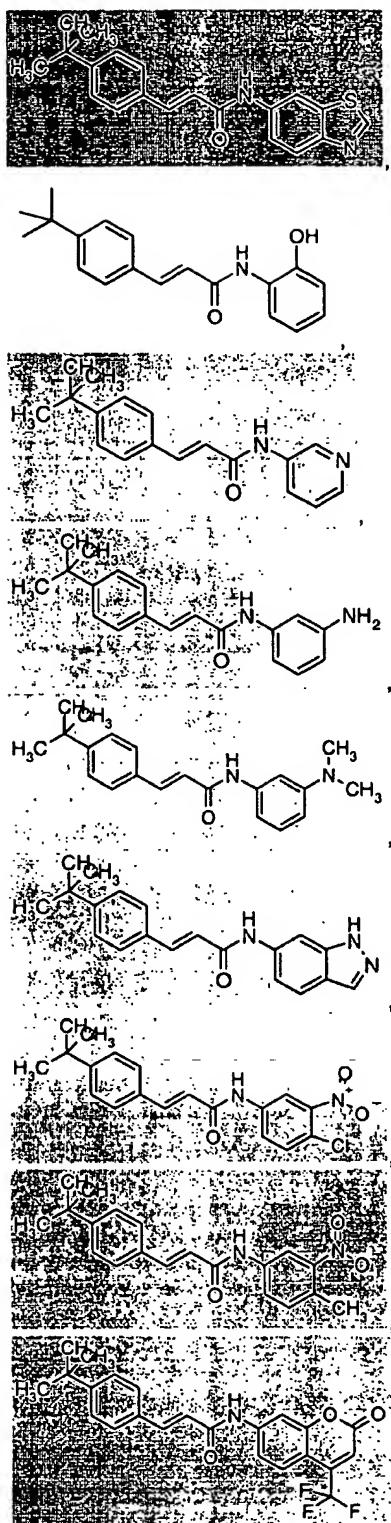
168. A compound according to Claim 1, or a pharmaceutically-  
10 acceptable salt thereof, wherein the compounds is selected from:



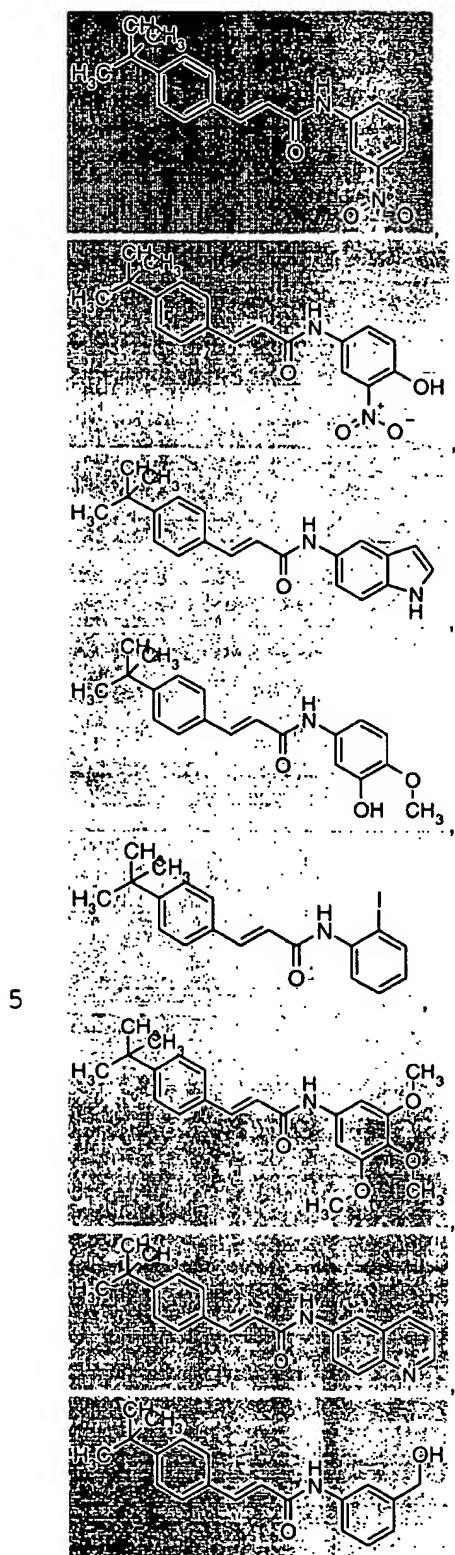
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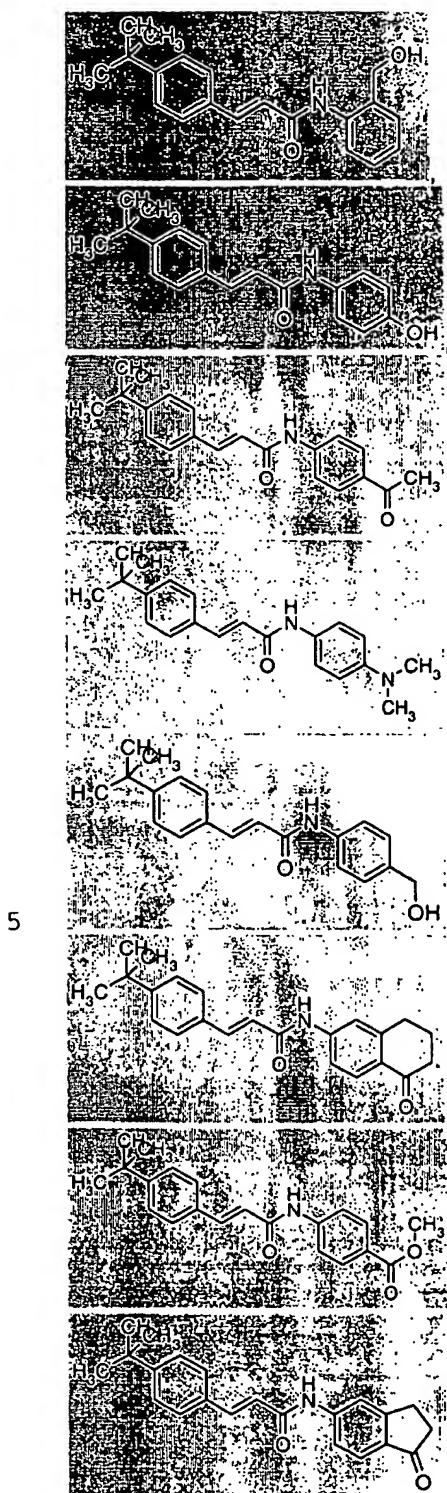
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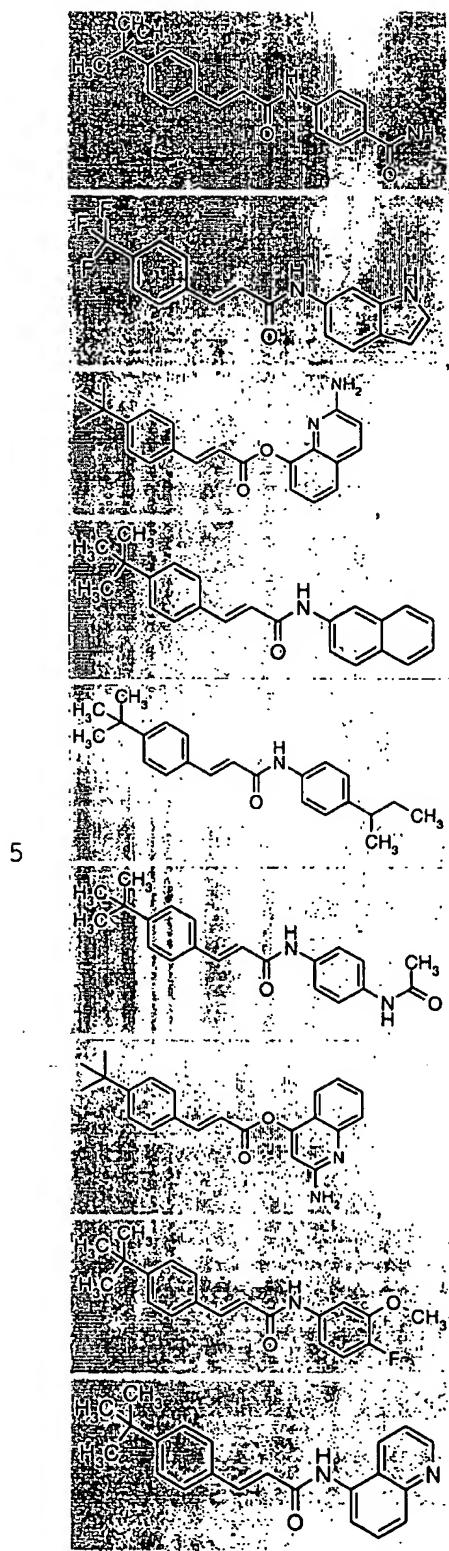
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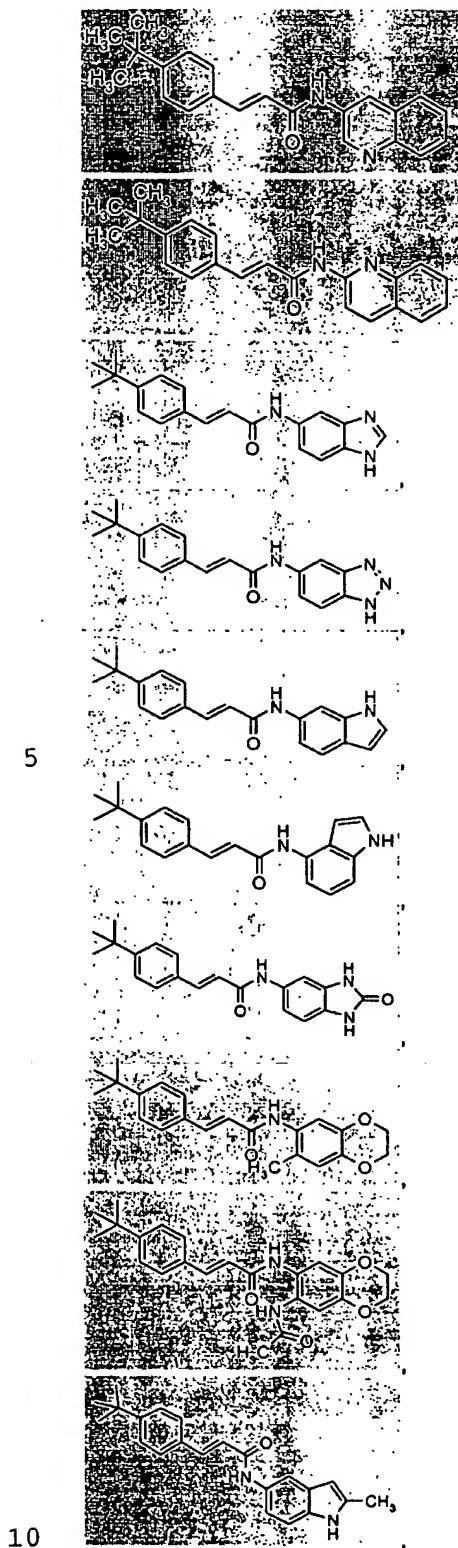
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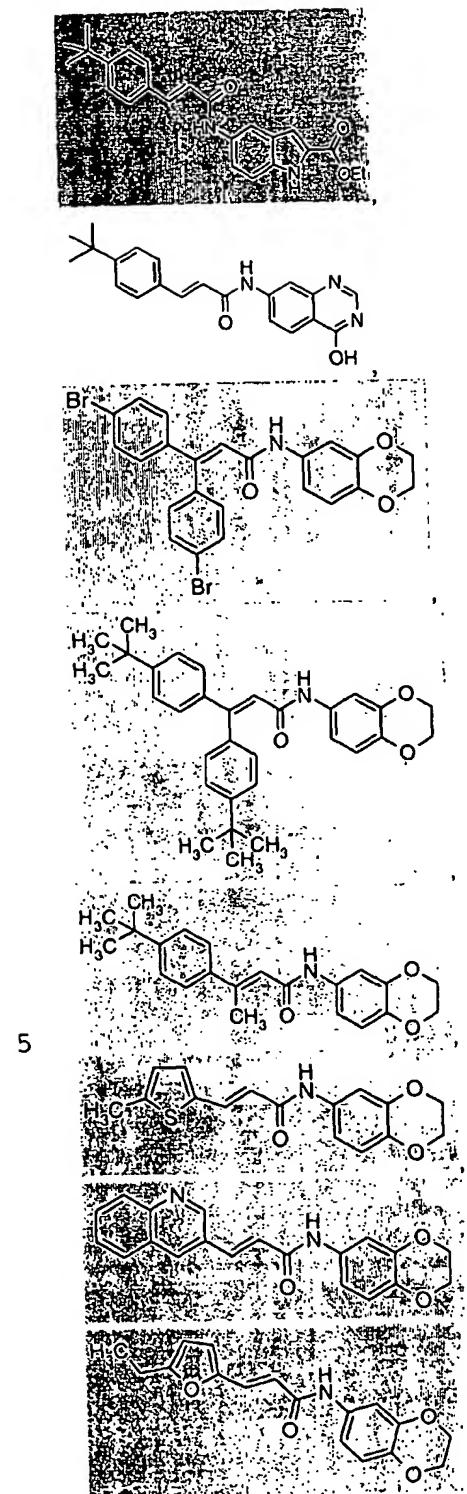
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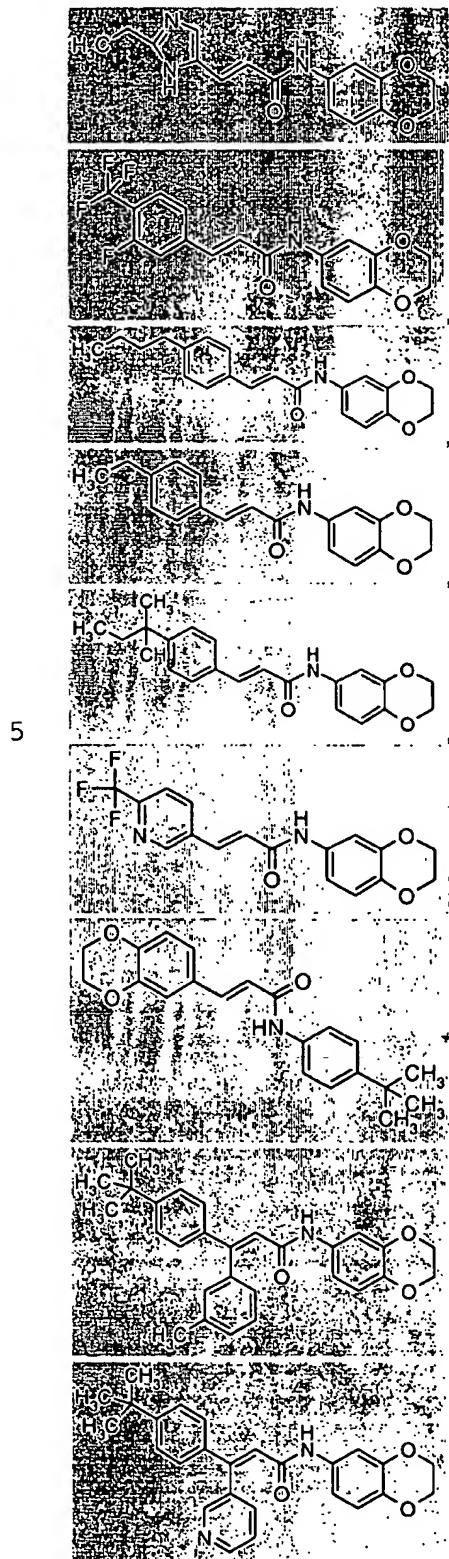
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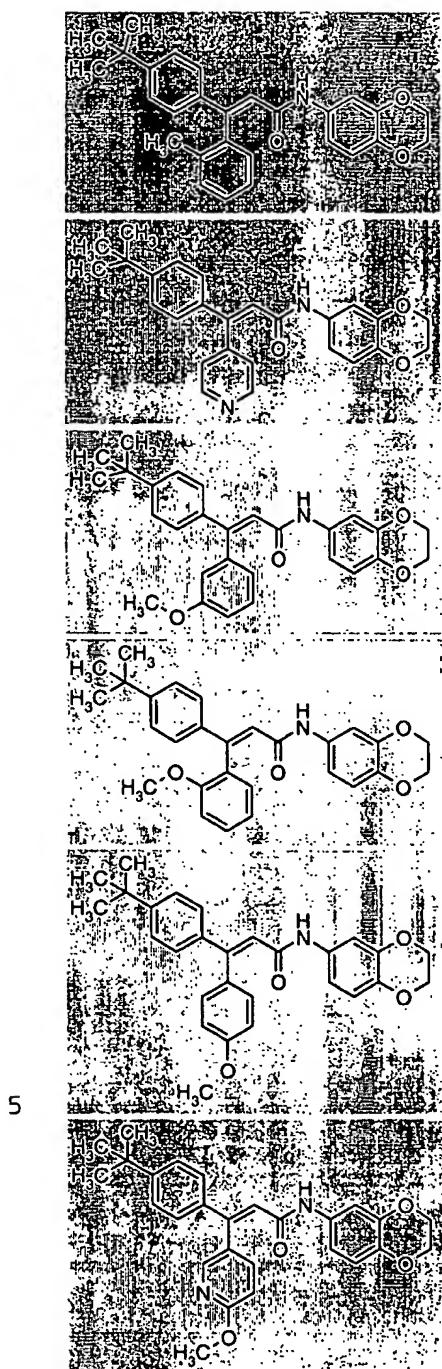
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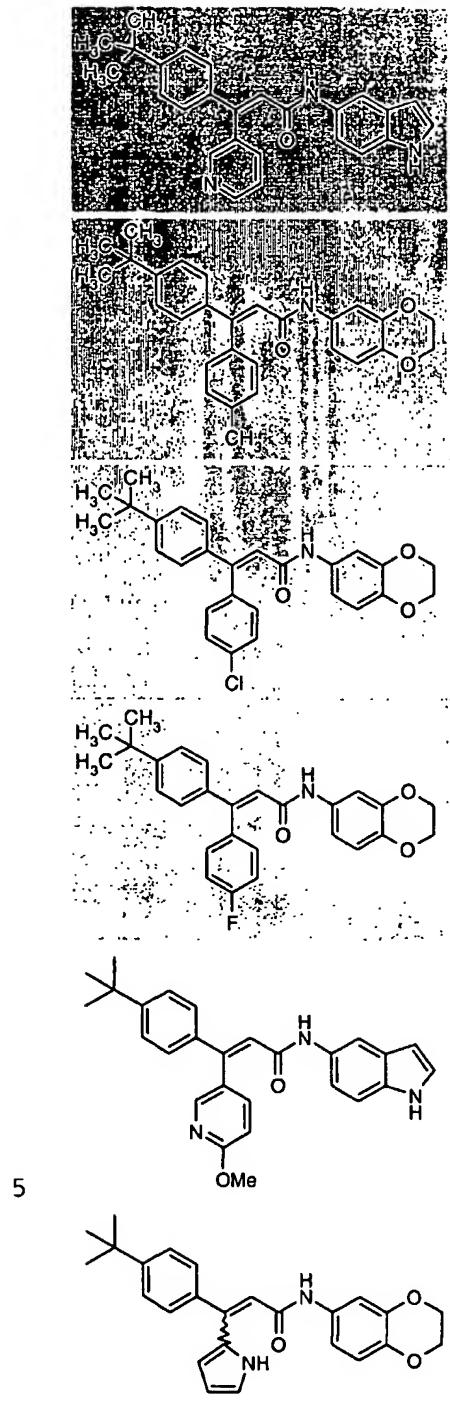
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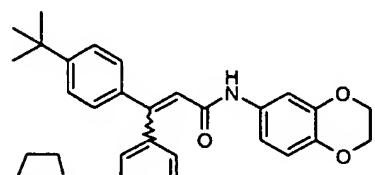
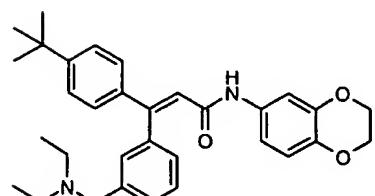
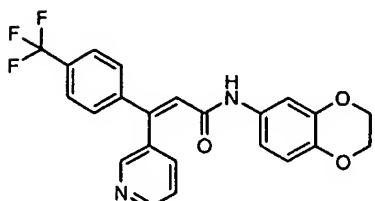
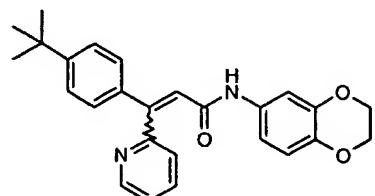
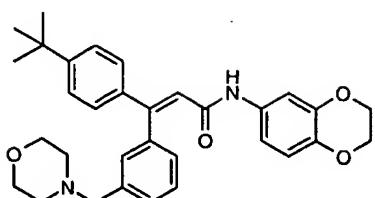
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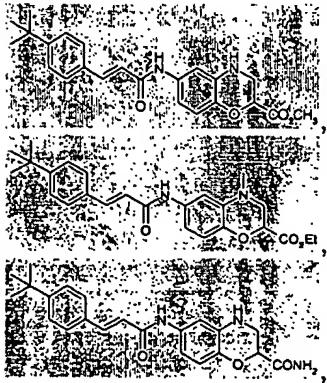
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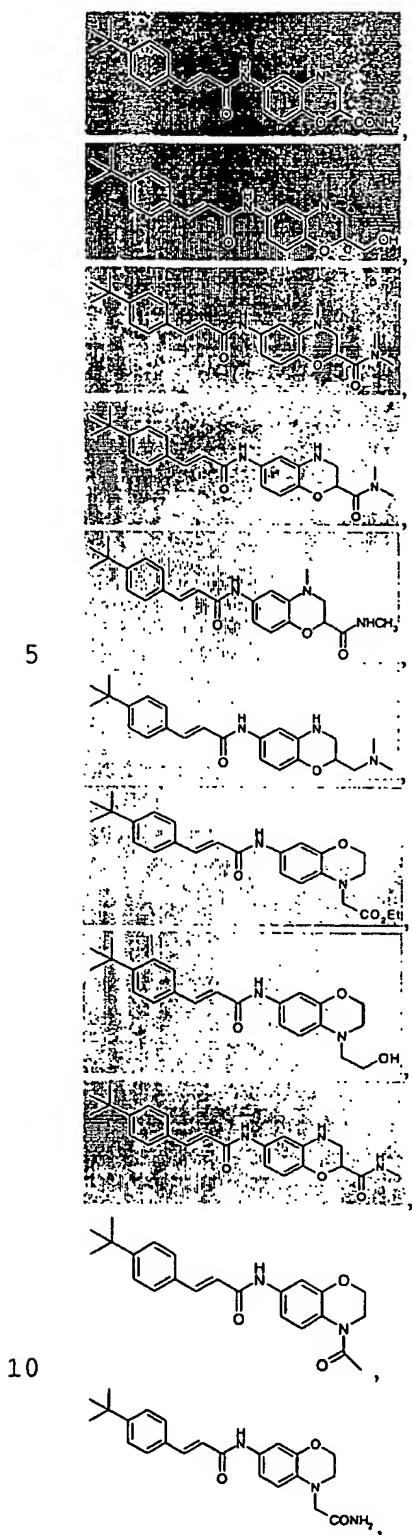
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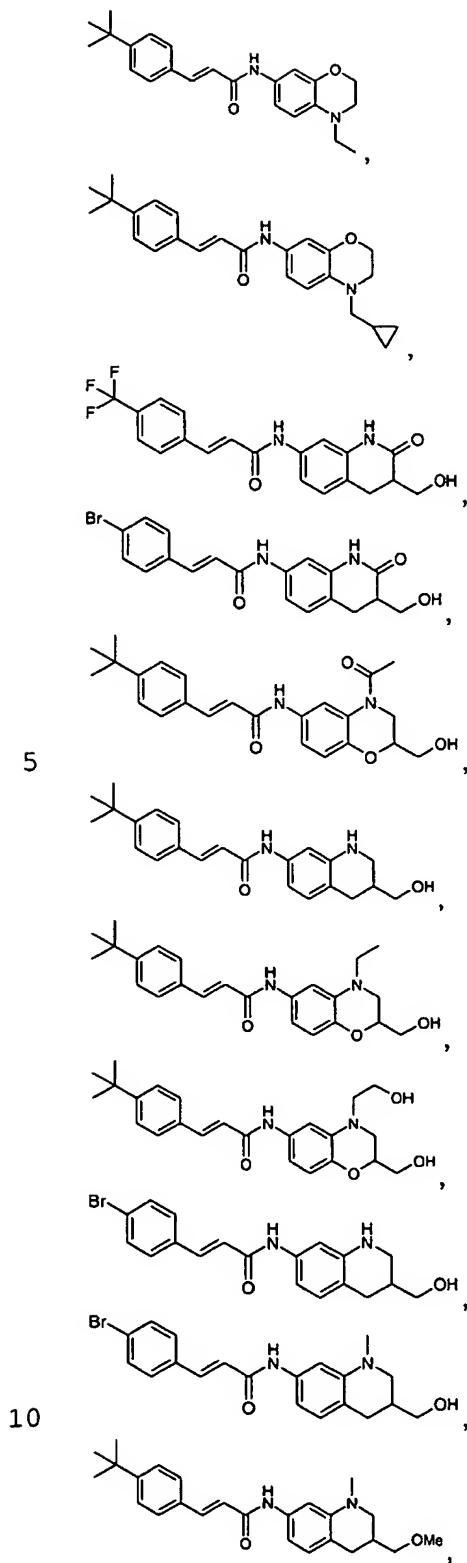
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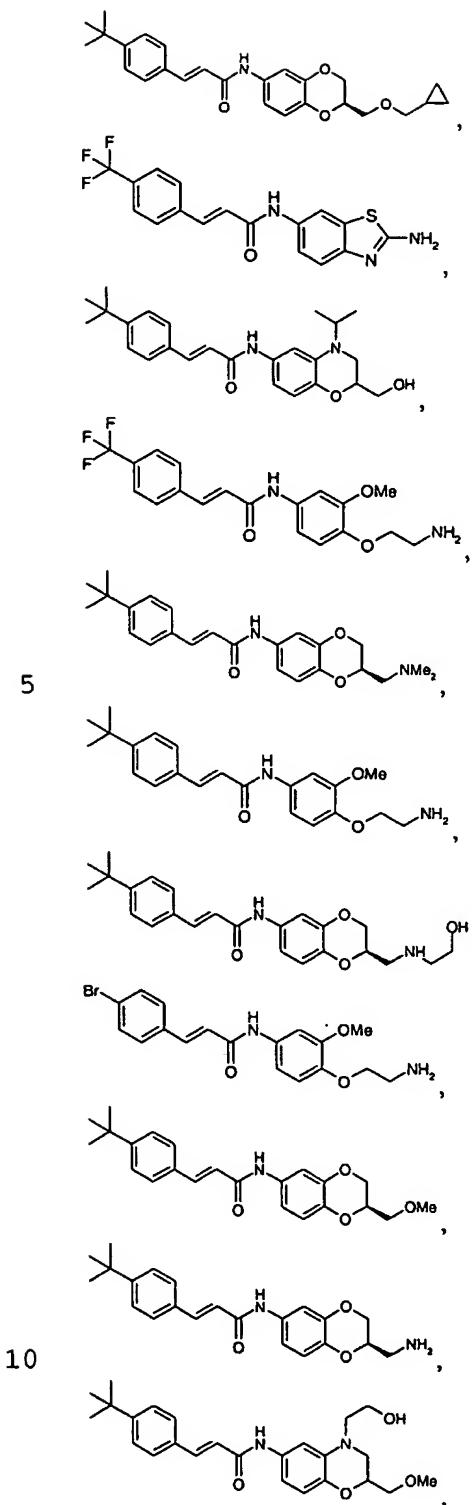
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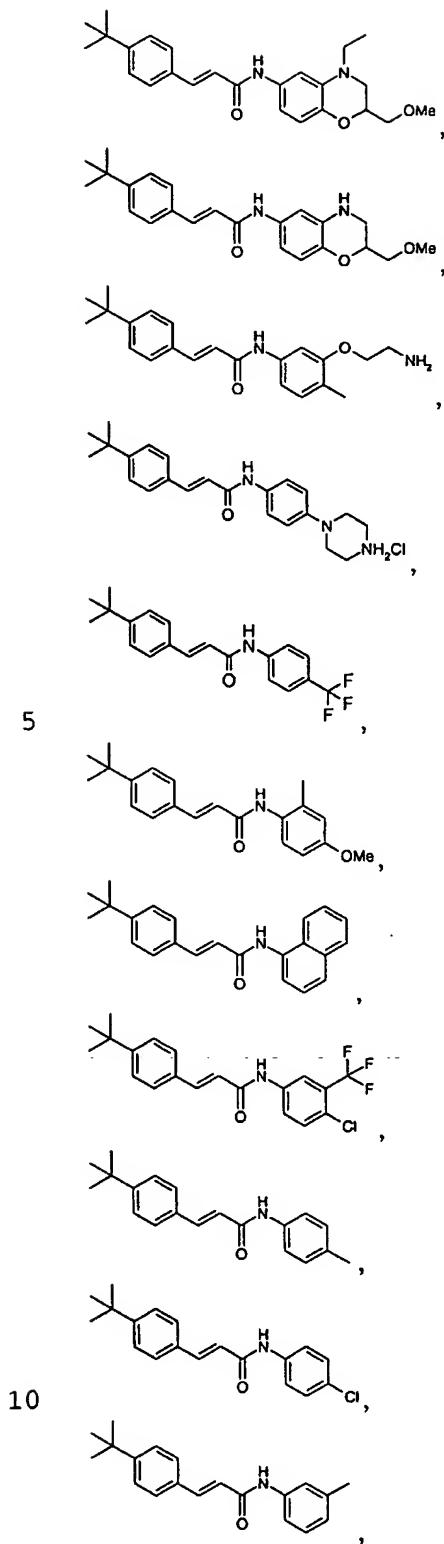
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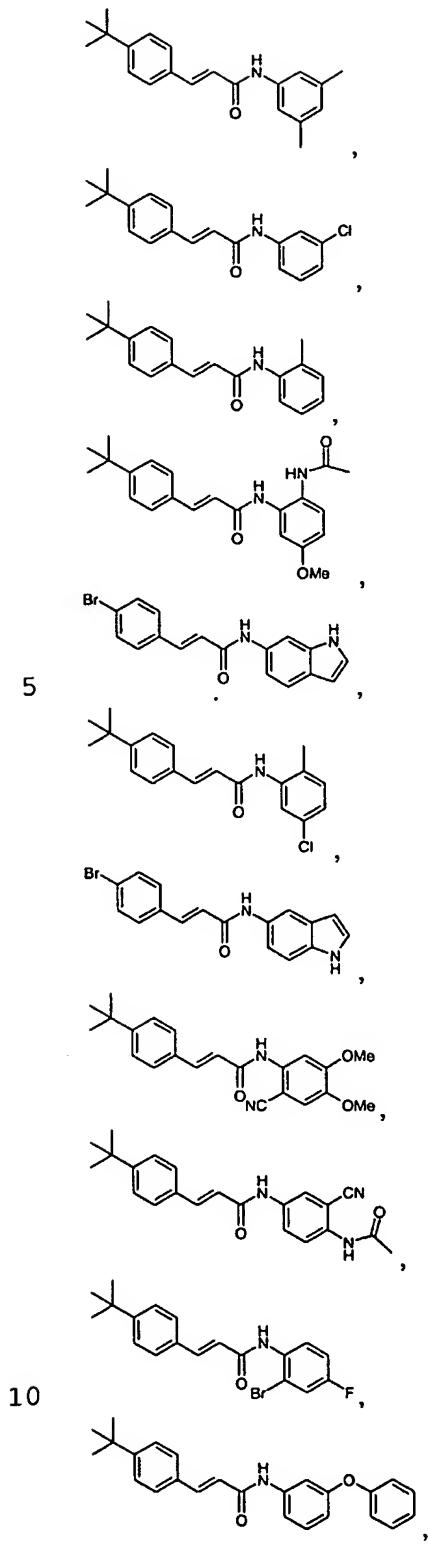
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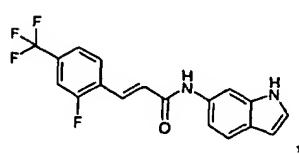
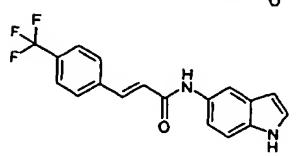
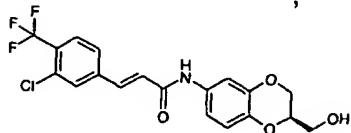
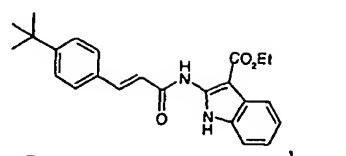
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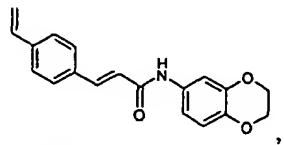
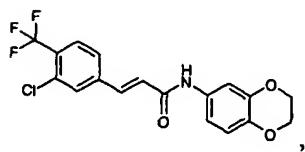
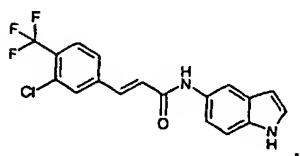
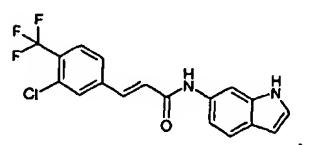
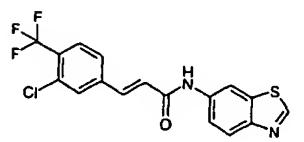
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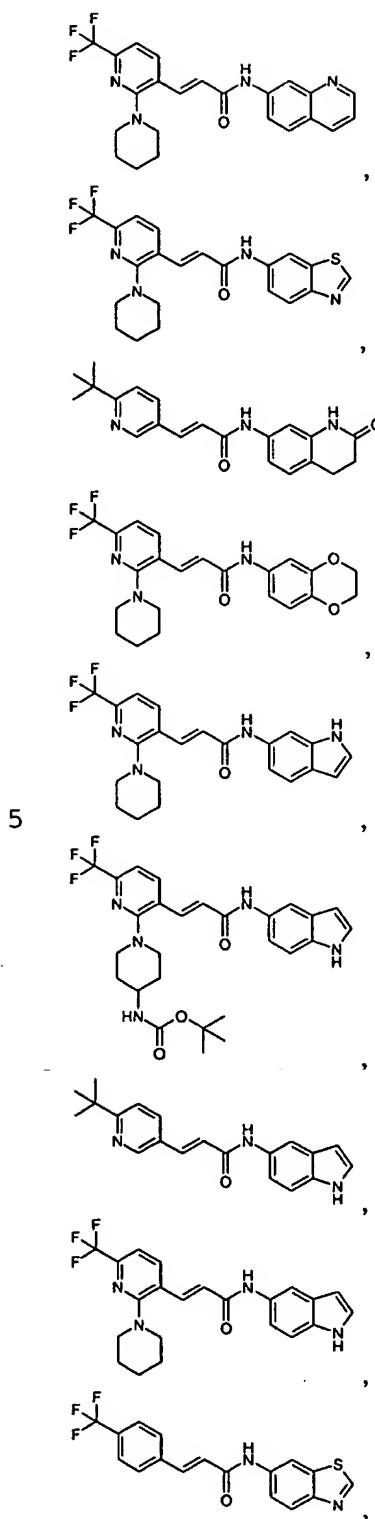


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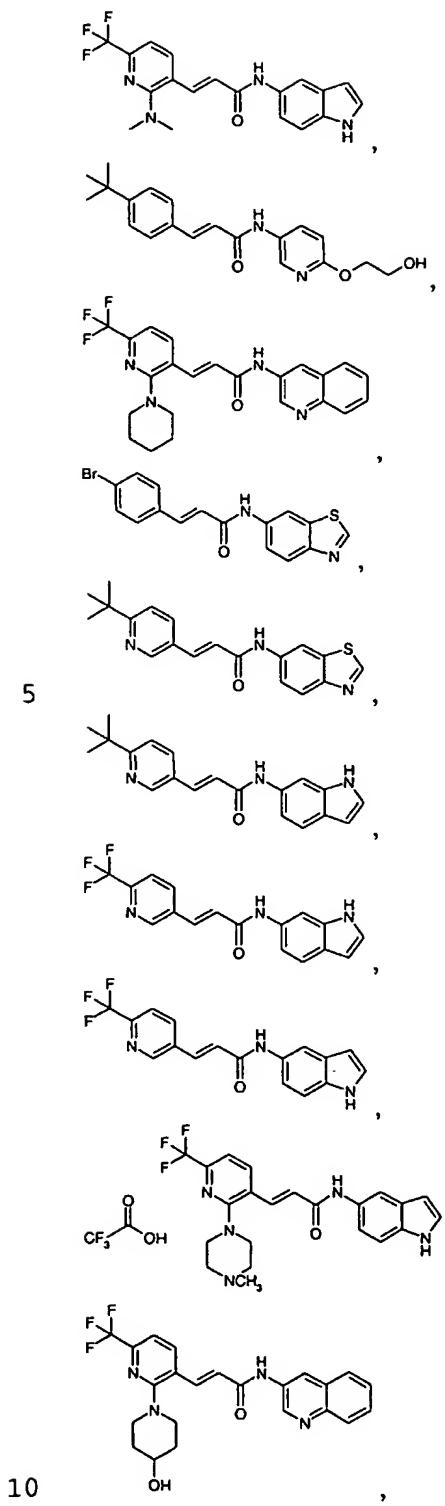


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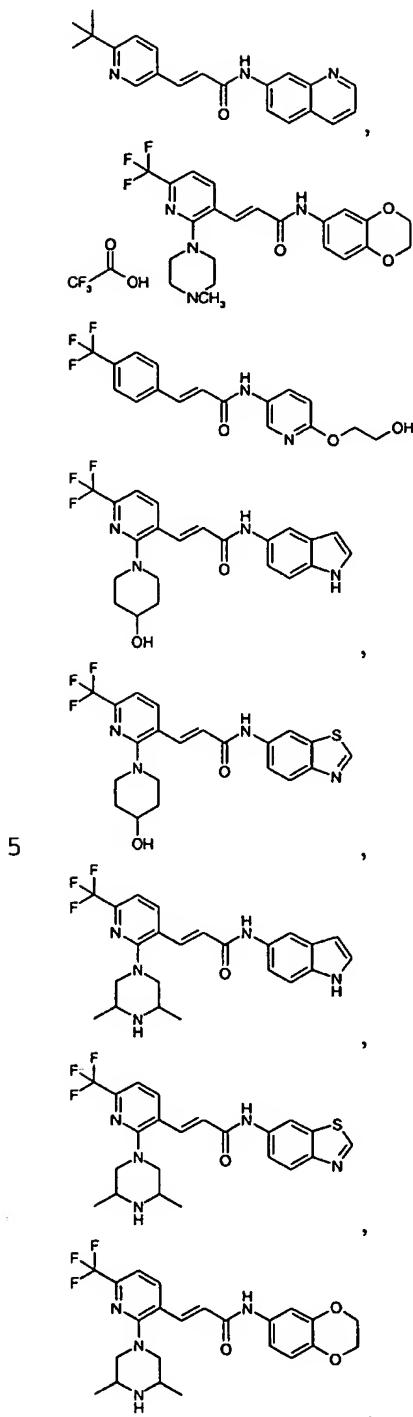
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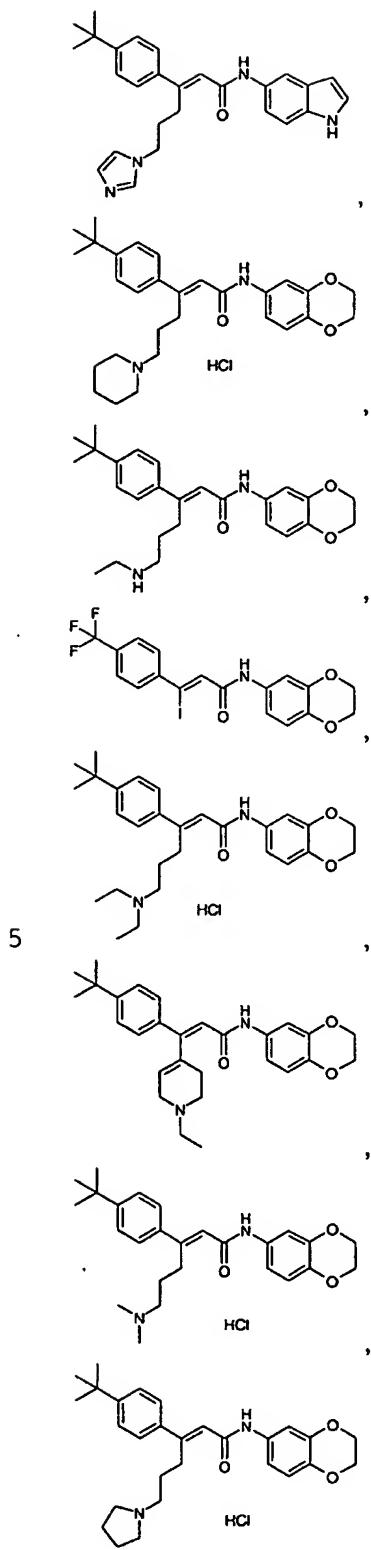
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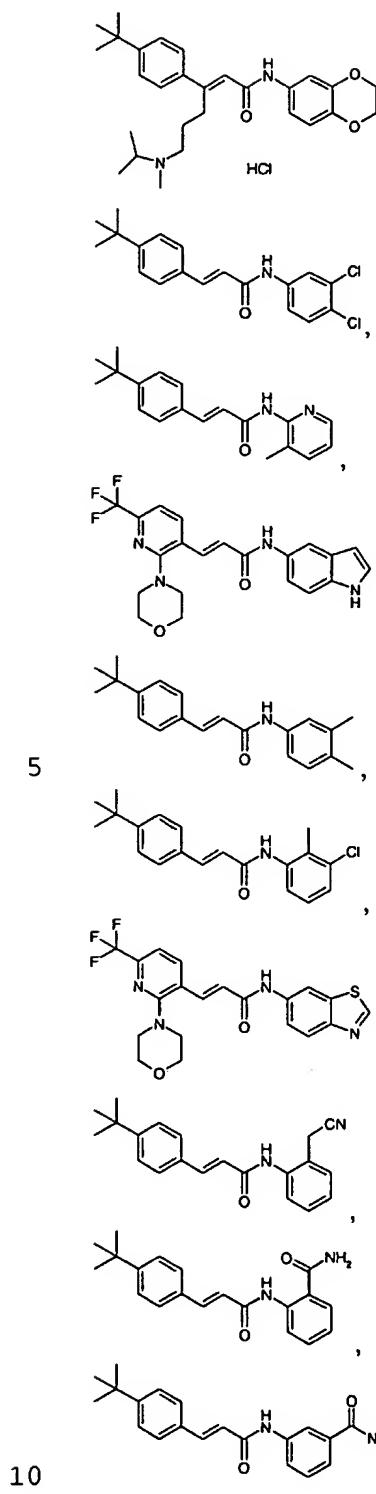
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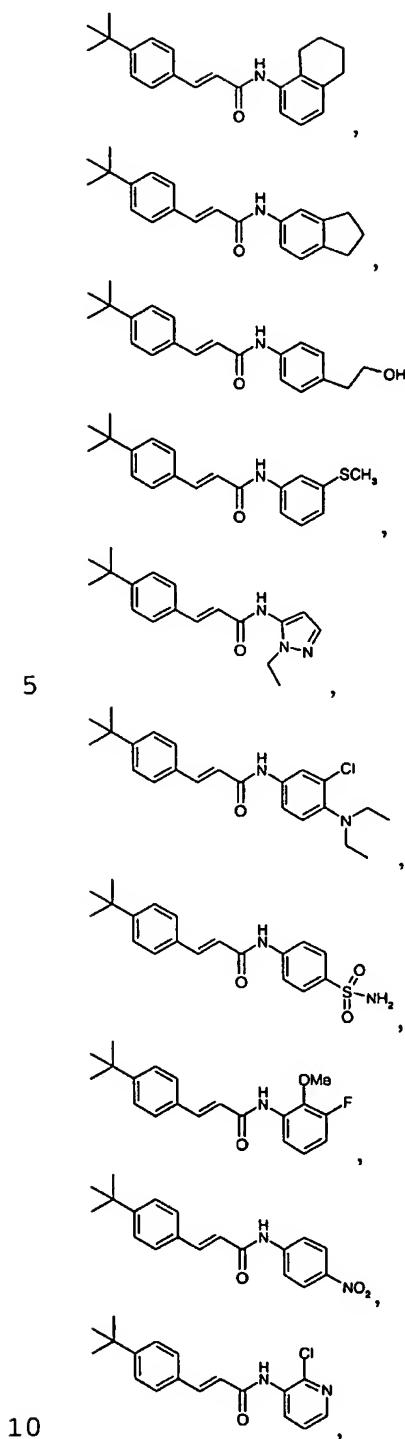
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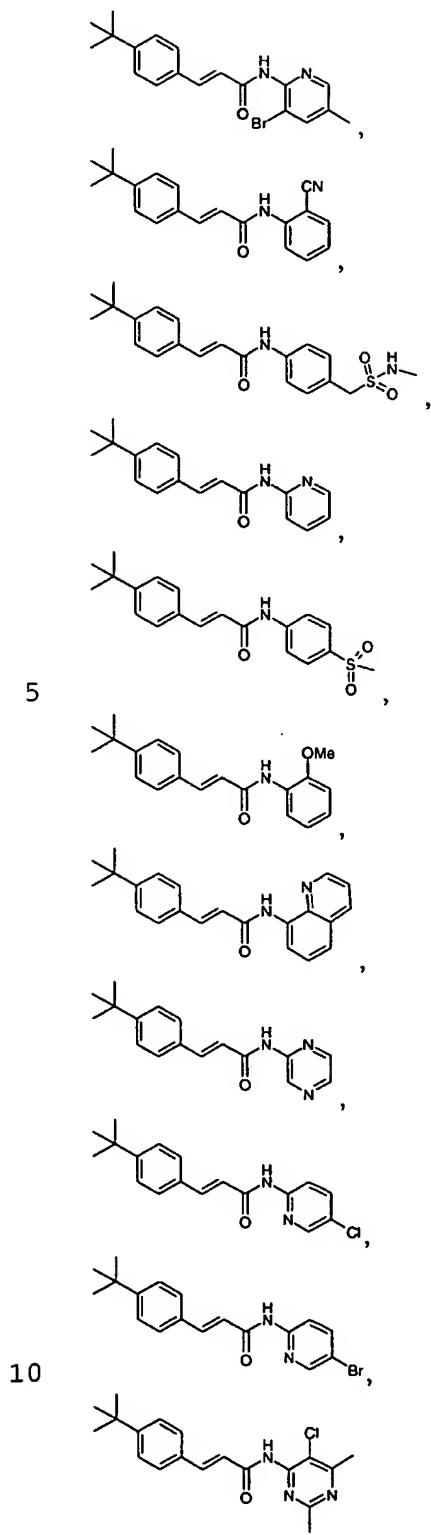
- 576 -



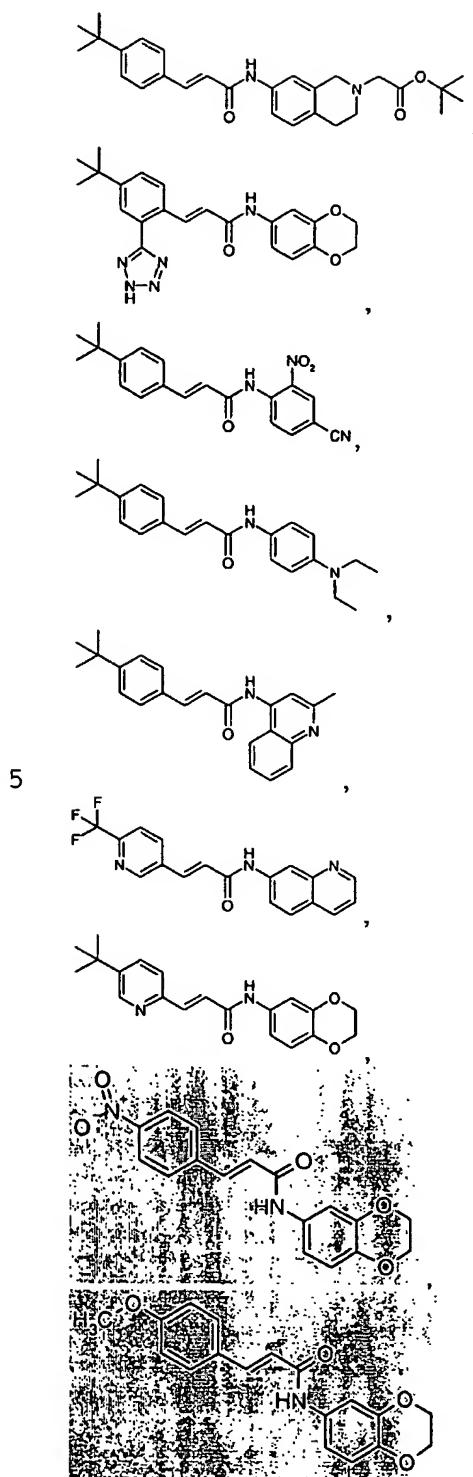
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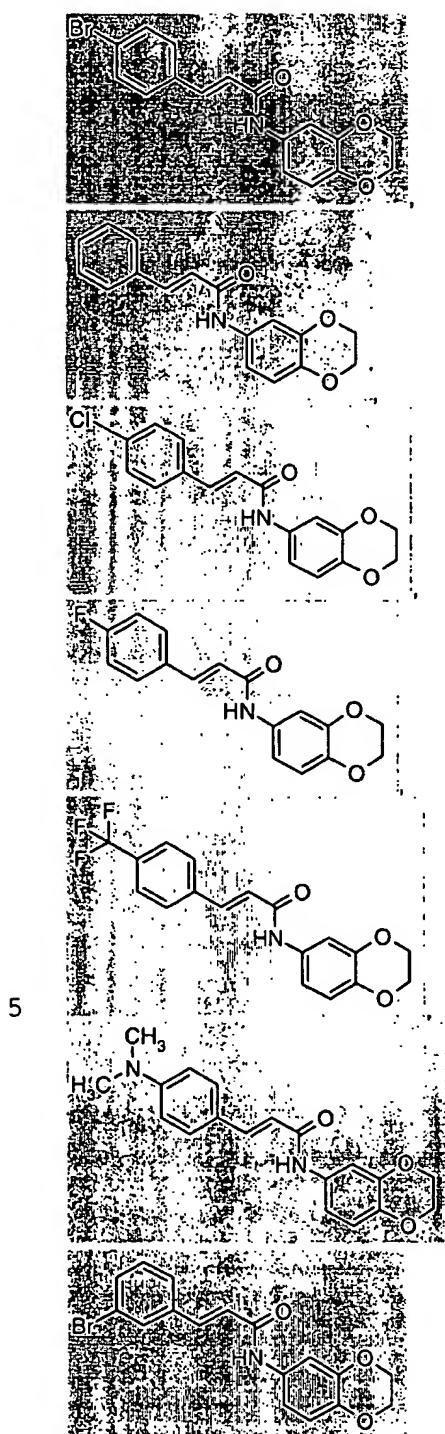
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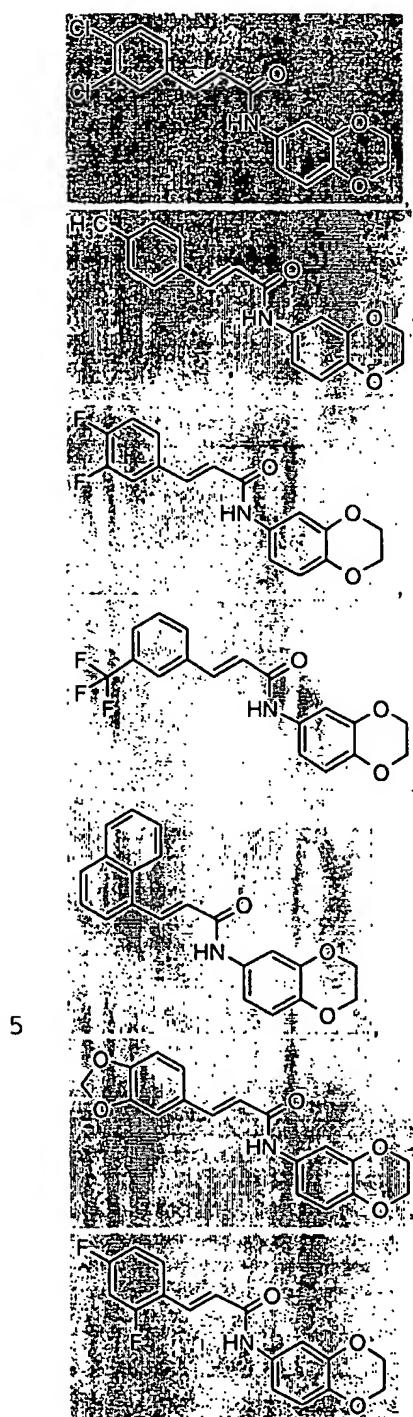
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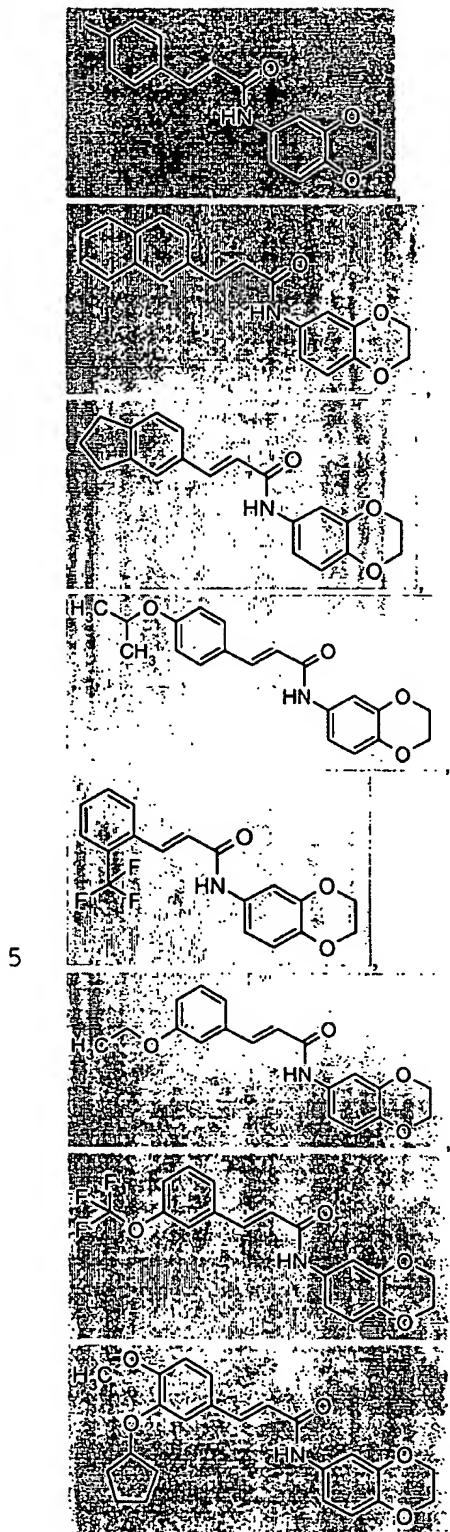
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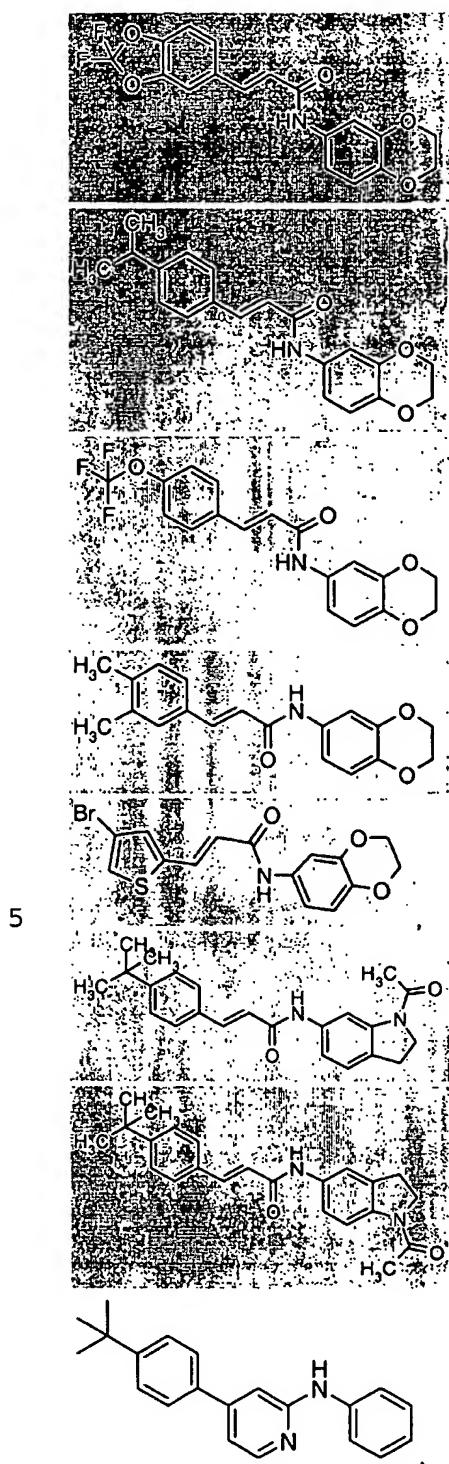
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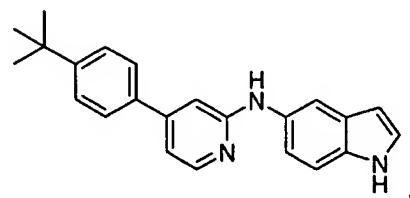
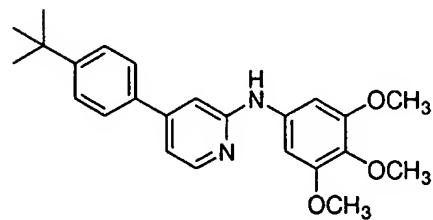
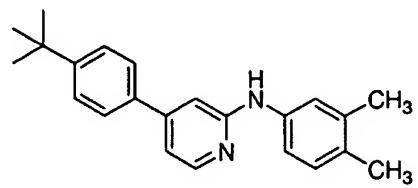
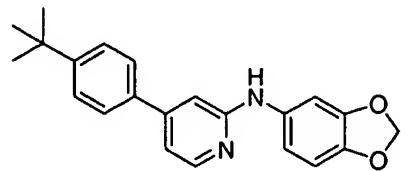
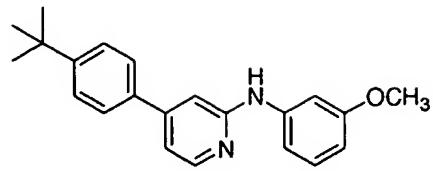
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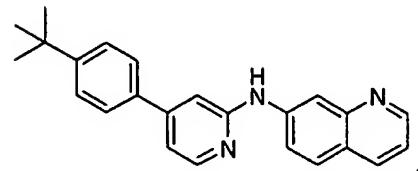
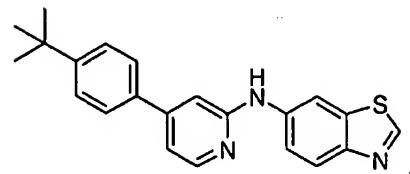
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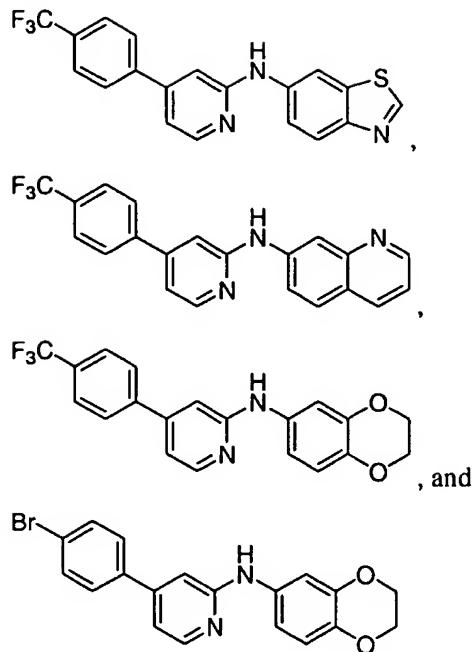
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169. A pharmaceutical composition comprising a compound according to any one of Claims 1-168 and a pharmaceutically-acceptable diluent or carrier.

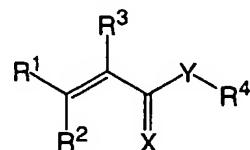
10 170. The use of a compound according the any one of Claims 1-168 as a medicament.

15 171. The use of a compound according the any one of Claims 1-168 in the manufacture of a medicament for the treatment of acute, inflammatory and neuropathic pain, dental pain, general headache, migraine, cluster headache, mixed-vascular and non-vascular syndromes, tension headache, general inflammation, arthritis, rheumatic diseases, osteoarthritis, inflammatory bowel disorders, inflammatory eye disorders, inflammatory or unstable bladder disorders, psoriasis, skin complaints with inflammatory components, chronic inflammatory conditions, inflammatory pain and associated hyperalgesia and  
20 allodynia, neuropathic pain and associated hyperalgesia and allodynia, diabetic neuropathy pain, causalgia, sympathetically maintained pain, deafferentation syndromes, asthma, epithelial tissue damage or dysfunction, herpes simplex,

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disturbances of visceral motility at respiratory, genitourinary, gastrointestinal or vascular regions, wounds, burns, allergic skin reactions, pruritis, vitiligo, general gastrointestinal disorders, gastric ulceration, duodenal ulcers, diarrhea, gastric lesions induced by necrotising agents, hair growth, vasomotor or allergic rhinitis,  
 5 bronchial disorders or bladder disorders.

172. The manufacture of a medicament for the treatment of acute, inflammatory and neuropathic pain, dental pain, general headache, migraine, cluster headache, mixed-vascular and non-vascular syndromes, tension headache,  
 10 general inflammation, arthritis, rheumatic diseases, osteoarthritis, inflammatory bowel disorders, inflammatory eye disorders, inflammatory or unstable bladder disorders, psoriasis, skin complaints with inflammatory components, chronic inflammatory conditions, inflammatory pain and associated hyperalgesia and allodynia, neuropathic pain and associated hyperalgesia and allodynia, diabetic  
 15 neuropathy pain, causalgia, sympathetically maintained pain, deafferentation syndromes, asthma, epithelial tissue damage or dysfunction, herpes simplex, disturbances of visceral motility at respiratory, genitourinary, gastrointestinal or vascular regions, wounds, burns, allergic skin reactions, pruritis, vitiligo, general gastrointestinal disorders, gastric ulceration, duodenal ulcers, diarrhea, gastric  
 20 lesions induced by necrotising agents, hair growth, vasomotor or allergic rhinitis, bronchial disorders or bladder disorders, wherein the medicament contains a compound having the structure:



wherein:

25 X is O, S or NR<sup>m</sup>;  
 n is independently, at each instance, 0, 1 or 2;  
 o is independently, at each instance, 0, 1, 2 or 3;  
 R<sup>m</sup> is independently at each instance H or R<sup>n</sup>;  
 R<sup>n</sup> is independently at each instance C<sub>1-8</sub>alkyl, phenyl or benzyl;

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$R^q$  is independently in each instance H,  $C_{1-4}$ alkyl,  $C_{1-4}$ haloalkyl, halo, cyano, nitro,  $-C(=O)R^n$ ,  $-C(=O)OR^n$ ,  $-C(=O)NR^mR^m$ ,  $-C(=NR^m)NR^mR^m$ ,  $-OR^m$ ,  $-OC(=O)R^n$ ,  $-OC(=O)NR^mR^m$ ,  $-OC(=O)N(R^m)S(=O)_2R^n$ ,  $-OC_{2-6}$ alkyl $NR^mR^m$ ,  $-OC_{2-6}$ alkyl $OR^m$ ,  $-SR^m$ ,  $-S(=O)R^n$ ,  $-S(=O)_2R^n$ ,  $-S(=O)_2NR^mR^m$ ,

5  $-S(=O)_2N(R^m)C(=O)R^n$ ,  $-S(=O)_2N(R^m)C(=O)OR^n$ ,  $-S(=O)_2N(R^m)C(=O)NR^mR^m$ ,  $-NR^mR^m$ ,  $-N(R^m)C(=O)R^n$ ,  $-N(R^m)C(=O)OR^n$ ,  $-N(R^m)C(=O)NR^mR^m$ ,  $-N(R^m)C(=NR^m)NR^mR^m$ ,  $-N(R^m)S(=O)_2R^n$ ,  $-N(R^m)S(=O)_2NR^mR^m$ ,  $-NR^mC_{2-6}$ alkyl $NR^mR^m$  or  $-NR^mC_{2-6}$ alkyl $OR^m$ ;

$R^s$  is  $R^n$  substituted by 0, 1, 2 or 3 substituents independently selected from  $R^q$ ;

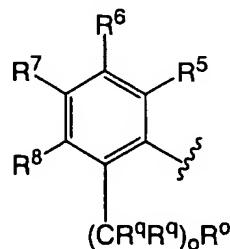
$R^3$  is H or  $C_{1-4}$ alkyl;

$R^5$  is H,  $C_{1-9}$ alkyl,  $C_{1-4}$ haloalkyl, halo, nitro, cyano,  $-OC_{1-6}$ alkyl,  $-O-C_{1-4}$ haloalkyl,  $-O-C_{1-6}$ alkyl $NR^mR^m$ ,  $-O-C_{1-6}$ alkyl $OR^m$ ,  $-NR^mR^m$ ,  $-NR^m-C_{1-4}$ haloalkyl,  $-NR^m-C_{1-6}$ alkyl $NR^mR^m$ ,  $-NR^m-C_{1-6}$ alkyl $OR^m$ , or  $-(CH_2)_nR^c$

15  $R^6$  is, independently at each instance, H,  $C_{1-9}$ alkyl,  $C_{1-4}$ haloalkyl, halo, nitro, cyano,  $-OC_{1-6}$ alkyl,  $-O-C_{1-4}$ haloalkyl,  $-O-C_{1-6}$ alkyl $NR^mR^m$ ,  $-O-C_{1-6}$ alkyl $OR^m$ ,  $-NR^mR^m$ ,  $-NR^m-C_{1-4}$ haloalkyl,  $-NR^m-C_{1-6}$ alkyl $NR^mR^m$  or  $-NR^m-C_{1-6}$ alkyl $OR^m$ ;

$R^8$  is H,  $C_{1-9}$ alkyl,  $C_{1-4}$ haloalkyl, halo, nitro, cyano,  $-OC_{1-6}$ alkyl,  $20 -O-C_{1-4}$ haloalkyl,  $-O-C_{1-6}$ alkyl $NR^mR^m$ ,  $-O-C_{1-6}$ alkyl $OR^m$ ,  $-NR^mR^m$ ,  $-NR^m-C_{1-4}$ haloalkyl,  $-NR^m-C_{1-6}$ alkyl $NR^mR^m$  or  $-NR^m-C_{1-6}$ alkyl $OR^m$ ; and

(A)  $R^1$  is



$R^2$  is H,  $-OR^m$ , halo,  $C_{1-3}$ haloalkyl or  $C_{1-6}$ alkyl;

25  $R^4$  is a saturated or unsaturated 5- or 6-membered ring containing 0, 1, 2 or 3 atoms selected from O, N and S that is optionally vicinally fused with a saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected from O, N and S with the remaining atoms being carbon, so long as the

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combination of O and S atoms is not greater than 2, wherein the ring and bridge are substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>,

5 -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>,

10 -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,

15 -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,

20 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>,

25 -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; and the ring

30 and bridge carbon atoms are substituted with 0, 1 or 2 =O groups;

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$R^7$  is  $C_{1-9}$ alkyl,  $C_{1-4}$ haloalkyl, halo, nitro, cyano,  $-OC_{1-6}$ alkyl,  $-O-C_{1-4}$ haloalkyl,  $-O-C_{1-6}$ alkyl $NR^mR^m$ ,  $-O-C_{1-6}$ alkyl $OR^m$ ,  $-NR^mR^m$ ,  $-NR^m-C_{1-4}$ haloalkyl,  $-NR^m-C_{1-6}$ alkyl $NR^mR^m$  or  $-NR^m-C_{1-6}$ alkyl $OR^m$ ;

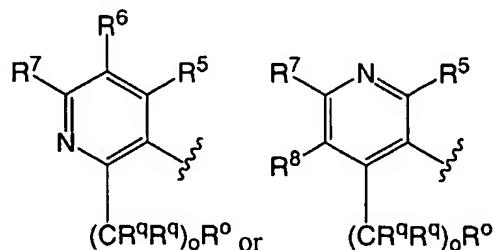
$R^0$  is a saturated, partially-saturated or unsaturated 5-, 6- or 7-membered

5 monocyclic or 7-, 8-, 9-, 10- or 11-membered bicyclic ring containing 0, 1, 2, 3 or 4 atoms selected from N, O and S, so long as the combination of O and S atoms is not greater than 2, wherein the carbon atoms of the ring are substituted by 0, 1 or 2 oxo groups, wherein the ring is substituted by 0, 1, 2 or 3 substituents independently selected from  $R^p$ ;

10  $R^p$  is independently at each instance  $C_{1-8}$ alkyl,  $C_{1-4}$ haloalkyl, halo, cyano, nitro,  $-C(=O)R^n$ ,  $-C(=O)OR^n$ ,  $-C(=O)NR^mR^m$ ,  $-C(=NR^m)NR^mR^m$ ,  $-OR^m$ ,  $-OC(=O)R^n$ ,  $-OC(=O)NR^mR^m$ ,  $-OC(=O)N(R^m)S(=O)_2R^n$ ,  $-OC_{2-6}$ alkyl $NR^mR^m$ ,  $-OC_{2-6}$ alkyl $OR^m$ ,  $-SR^m$ ,  $-S(=O)R^n$ ,  $-S(=O)_2R^n$ ,  $-S(=O)_2NR^mR^m$ ,  $-S(=O)_2N(R^m)C(=O)R^n$ ,  $-S(=O)_2N(R^m)C(=O)OR^n$ ,  $-S(=O)_2N(R^m)C(=O)NR^mR^m$ ,  $15 -NR^mR^m$ ,  $-N(R^m)C(=O)R^n$ ,  $-N(R^m)C(=O)OR^n$ ,  $-N(R^m)C(=O)NR^mR^m$ ,  $-N(R^m)C(=NR^m)NR^mR^m$ ,  $-N(R^m)S(=O)_2R^n$ ,  $-N(R^m)S(=O)_2NR^mR^m$ ,  $-NR^mC_{2-6}$ alkyl $NR^mR^m$  or  $-NR^mC_{2-6}$ alkyl $OR^m$ ; and

Y is O or NH; or

(B)  $R^1$  is



20  $(CR^qR^q)_oR^0$  or  $(CR^qR^q)_oR^0$

$R^2$  is H,  $-OR^m$ , halo,  $C_{1-3}$ haloalkyl or  $C_{1-6}$ alkyl;

$R^4$  is a saturated or unsaturated 5- or 6-membered ring containing 0, 1, 2 or 3 atoms selected from O, N and S that is optionally vicinally fused with a saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected  
25 from O, N and S with the remaining atoms being carbon, so long as the combination of O and S atoms is not greater than 2, wherein the ring and bridge are substituted by 0, 1, 2 or 3 substituents independently selected from  $C_{1-8}$ alkyl,  $C_{1-4}$ haloalkyl, halo, cyano, nitro,  $-C(=O)R^n$ ,  $-C(=O)OR^n$ ,  $-C(=O)NR^mR^m$ ,

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- C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>,
- OC(=O)N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>,
- S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>,
- 5 -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)R<sup>n</sup>,
- N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>,
- C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>,
- OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>,
- SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>,
- 10 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>,
- N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,
- N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup>  
and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo,  
cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>,
- 15 -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>,
- OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- 20 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,
- OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>,
- OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- 25 -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; and the ring  
and bridge carbon atoms are substituted with 0, 1 or 2 =O groups;
- R<sup>7</sup> is C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OC<sub>1-6</sub>alkyl,
- O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>,
- 30 -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>;

R<sup>9</sup> is a saturated, partially-saturated or unsaturated 5-, 6- or 7-membered monocyclic or 7-, 8-, 9-, 10- or 11-membered bicyclic ring containing 0, 1, 2, 3 or

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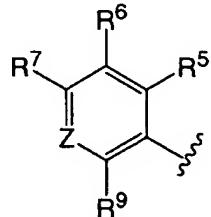
4 atoms selected from N, O and S, so long as the combination of O and S atoms is not greater than 2, wherein the carbon atoms of the ring are substituted by 0, 1 or 2 oxo groups, wherein the ring is substituted by 0, 1, 2 or 3 substituents independently selected from R<sup>p</sup>;

5       R<sup>p</sup> is independently at each instance C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,

10      -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; and

Y is O or NH; or

(C)     R<sup>1</sup> is



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R<sup>2</sup> is H, -OR<sup>m</sup>, halo, C<sub>1-3</sub>haloalkyl or C<sub>1-6</sub>alkyl;

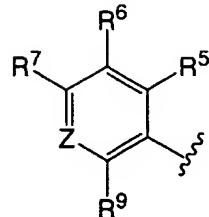
R<sup>4</sup> is a saturated, partially-saturated or unsaturated 8-, 9-, 10 or

11-membered bicyclic heterocycle containing 1, 2, 3, 4 or 5 atoms selected from O, N and S, so long as the combination of O and S atoms is not greater than 2, but  
 20 excluding quinolin-6-yl, 4,5,6,7-tetrahydro-benzo[b]thiophen-2-yl, benzothiazol-2-yl, 2,3-dihydro-benzo[1,4]dioxin-6-yl, wherein the heterocycle is substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-9</sub>alkyl, oxo, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OR<sup>m</sup>, -S(=O)<sub>n</sub>C<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>, -C(=O)C<sub>1-6</sub>alkyl, -OC(=O)C<sub>1-6</sub>alkyl, -C(=O)NR<sup>m</sup>C<sub>1-6</sub>alkyl, -NR<sup>m</sup>C(=O)C<sub>1-6</sub>alkyl -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,

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- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>,
- C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>,
- OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>,
- S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>,
- N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>,
- N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,
- OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>,
- OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; wherein R<sup>4</sup> is not 2-aminocarbonylmethyl-2,3-dihydro-benzo[1,4]dioxin-8-yl, 2-cyanomethyl-2,3-dihydro-benzo[1,4]dioxin-8-yl, quinolin-3-yl, 3H-quinazolin-4-on-3-yl,
- benzo[1,3]dioxol-5-yl, 3,3-dimethyl-1,3-dihydro-indol-2-on-6-yl or 4,4-dimethyl-3,4-dihydro-1H-quinolin-2-on-7-yl;
- R<sup>7</sup> is C<sub>1-8</sub>alkyl, C<sub>1-8</sub>haloalkyl, I or Br
- R<sup>9</sup> is H, C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OC<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl,
- NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>, or -(CH<sub>2</sub>)<sub>n</sub>R<sup>c</sup>;
- R<sup>9</sup> is independently, at each instance, H, C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OC<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>;
- Y is NH; and
- Z is CR<sup>8</sup> or N; or
- (D) R<sup>1</sup> is

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$R^2$  is  $C_{1-6}$ alkyl substituted by 1, 2 or 3 substituents selected from  $C_{1-4}$ haloalkyl, halo, cyano, nitro,  $-C(=O)R^n$ ,  $-C(=O)OR^n$ ,  $-C(=O)NR^mR^m$ ,  $-C(=NR^m)NR^mR^m$ ,  $-OR^m$ ,  $-OC(=O)R^n$ ,  $-OC(=O)NR^mR^m$ ,

5     $-OC(=O)N(R^m)S(=O)R^n$ ,  $-OC_{2-6}\text{alkyl}NR^mR^m$ ,  $-OC_{2-6}\text{alkyl}OR^m$ ,  $-SR^m$ ,  $-S(=O)R^n$ ,  $-S(=O)_2R^n$ ,  $-S(=O)_2NR^mR^m$ ,  $-S(=O)_2N(R^m)C(=O)R^n$ ,  $-S(=O)_2N(R^m)C(=O)OR^n$ ,  $-S(=O)_2N(R^m)C(=O)NR^mR^m$ ,  $-NR^mR^m$ ,  $-N(R^m)C(=O)R^n$ ,  $-N(R^m)C(=O)OR^n$ ,  $-N(R^m)C(=O)NR^mR^m$ ,  $-N(R^m)C(=NR^m)NR^mR^m$ ,  $-N(R^m)S(=O)_2R^n$ ,  $-N(R^m)S(=O)NR^mR^m$ ,  $-NR^mC_{2-6}\text{alkyl}NR^mR^m$  or  $-NR^mC_{2-6}\text{alkyl}OR^m$ ; or

10     $R^2$  is  $-(C(R^q)_2)_0\text{phenyl}$ , wherein the phenyl is substituted by 0, 1, 2 or 3 substituents independently selected from  $C_{1-8}$ alkyl,  $C_{1-4}$ haloalkyl, halo, cyano, nitro,  $-C(=O)R^n$ ,  $-C(=O)OR^n$ ,  $-C(=O)NR^mR^m$ ,  $-C(=NR^m)NR^mR^m$ ,  $-OR^m$ ,  $-OC(=O)R^n$ ,  $-OC(=O)NR^mR^m$ ,  $-OC(=O)N(R^m)S(=O)R^n$ ,  $-OC_{2-6}\text{alkyl}NR^mR^m$ ,  $-OC_{2-6}\text{alkyl}OR^m$ ,  $-SR^m$ ,  $-S(=O)R^n$ ,  $-S(=O)_2R^n$ ,  $-S(=O)_2NR^mR^m$ ,  $15    -S(=O)_2N(R^m)C(=O)R^n$ ,  $-S(=O)_2N(R^m)C(=O)OR^n$ ,  $-S(=O)_2N(R^m)C(=O)NR^mR^m$ ,  $-NR^mR^m$ ,  $-N(R^m)C(=O)R^n$ ,  $-N(R^m)C(=O)OR^n$ ,  $-N(R^m)C(=O)NR^mR^m$ ,  $-N(R^m)C(=NR^m)NR^mR^m$ ,  $-N(R^m)S(=O)_2R^n$ ,  $-N(R^m)S(=O)NR^mR^m$ ,  $-NR^mC_{2-6}\text{alkyl}NR^mR^m$ ,  $-NR^mC_{2-6}\text{alkyl}OR^m$ ,  $-C(=O)R^s$ ,  $-C(=O)OR^s$ ,  $-C(=O)NR^mR^s$ ,  $-C(=NR^m)NR^mR^s$ ,  $-OR^s$ ,  $-OC(=O)R^s$ ,  $-OC(=O)NR^mR^s$ ,  $20    -OC(=O)N(R^m)S(=O)_2R^s$ ,  $-OC_{2-6}\text{alkyl}NR^mR^s$ ,  $-OC_{2-6}\text{alkyl}OR^s$ ,  $-SR^s$ ,  $-S(=O)R^s$ ,  $-S(=O)_2R^s$ ,  $-S(=O)_2NR^mR^s$ ,  $-S(=O)_2N(R^m)C(=O)R^s$ ,  $-S(=O)_2N(R^m)C(=O)OR^s$ ,  $-S(=O)_2N(R^m)C(=O)NR^mR^s$ ,  $-NR^mR^s$ ,  $-N(R^m)C(=O)R^s$ ,  $-N(R^m)C(=O)OR^s$ ,  $-N(R^m)C(=O)NR^mR^s$ ,  $-N(R^m)C(=NR^m)NR^mR^s$ ,  $-N(R^m)S(=O)_2R^s$ ,  $-N(R^m)S(=O)_2NR^mR^s$ ,  $-NR^mC_{2-6}\text{alkyl}NR^mR^s$ ,  $-NR^mC_{2-6}\text{alkyl}OR^s$  and  $C_{1-4}$ alkyl

25    substituted by 1 or 2 groups selected from  $C_{1-2}$ haloalkyl, halo, cyano, nitro,  $-C(=O)R^n$ ,  $-C(=O)OR^n$ ,  $-C(=O)NR^mR^m$ ,  $-C(=NR^m)NR^mR^m$ ,  $-OR^m$ ,  $-OC(=O)R^n$ ,  $-OC(=O)NR^mR^m$ ,  $-OC(=O)N(R^m)S(=O)_2R^n$ ,  $-OC_{2-6}\text{alkyl}NR^mR^m$ ,  $-OC_{2-6}\text{alkyl}OR^m$ ,  $-SR^m$ ,  $-S(=O)R^n$ ,  $-S(=O)_2R^n$ ,  $-S(=O)_2NR^mR^m$ ,  $-S(=O)_2N(R^m)C(=O)R^n$ ,

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- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>,
- N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,
- 5 -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>,
- OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- 10 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; or
- R<sup>2</sup> is -(C(R<sup>q</sup>)<sub>2</sub>)<sub>0</sub>R<sup>r</sup>, wherein R<sup>r</sup> is a saturated or unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 heteroatoms independently selected from N, O and S, wherein no more than 2 of the ring members are O or S, wherein the heterocycle is optionally fused with a phenyl ring, and the heterocycle or fused phenyl ring is substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>,
- 15 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>,
- 20 -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>,
- 25 -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo,
- 30 cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,

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$\begin{aligned} & \text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)R}^{\text{n}}, \text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)OR}^{\text{n}}, \text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{m}}, \\ & \text{-NR}^{\text{m}}\text{R}^{\text{m}}, \text{-N(R}^{\text{m}}\text{)C(=O)R}^{\text{n}}, \text{-N(R}^{\text{m}}\text{)C(=O)OR}^{\text{n}}, \text{-N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{m}}, \\ & \text{-N(R}^{\text{m}}\text{)C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{m}}, \text{-N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{n}}, \text{-N(R}^{\text{m}}\text{)S(=O)}_2\text{NR}^{\text{m}}\text{R}^{\text{m}}, \\ & \text{-NR}^{\text{m}}\text{C}_{2\text{-}6}\text{alkylNR}^{\text{m}}\text{R}^{\text{m}}, \text{-C(=O)R}^{\text{s}}, \text{-C(=O)OR}^{\text{s}}, \text{-C(=O)NR}^{\text{m}}\text{R}^{\text{s}}, \text{-C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{s}}, \\ & \text{5} \quad \text{-OR}^{\text{s}}, \text{-OC(=O)R}^{\text{s}}, \text{-OC(=O)NR}^{\text{m}}\text{R}^{\text{s}}, \text{-OC(=O)N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{s}}, \text{-OC}_{2\text{-}6}\text{alkylNR}^{\text{m}}\text{R}^{\text{s}}, \\ & \text{-OC}_{2\text{-}6}\text{alkylOR}^{\text{s}}, \text{-SR}^{\text{s}}, \text{-S(=O)R}^{\text{s}}, \text{-S(=O)}_2\text{R}^{\text{s}}, \text{-S(=O)}_2\text{NR}^{\text{m}}\text{R}^{\text{s}}, \\ & \text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)R}^{\text{s}}, \text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)OR}^{\text{s}}, \text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{s}}, \\ & \text{-NR}^{\text{m}}\text{R}^{\text{s}}, \text{-N(R}^{\text{m}}\text{)C(=O)R}^{\text{s}}, \text{-N(R}^{\text{m}}\text{)C(=O)OR}^{\text{s}}, \text{-N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{s}}, \\ & \text{-N(R}^{\text{m}}\text{)C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{s}}, \text{-N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{s}}, \text{-N(R}^{\text{m}}\text{)S(=O)}_2\text{NR}^{\text{m}}\text{R}^{\text{s}}, \\ & \text{10} \quad \text{-NR}^{\text{m}}\text{C}_{2\text{-}6}\text{alkylNR}^{\text{m}}\text{R}^{\text{s}}, \text{-NR}^{\text{m}}\text{C}_{2\text{-}6}\text{alkylOR}^{\text{s}} \text{ and } \text{-NR}^{\text{m}}\text{C}_{2\text{-}6}\text{alkylOR}^{\text{m}}; \end{aligned}$

$\begin{aligned} & \text{R}^4 \text{ is a saturated or unsaturated 5- or 6-membered ring containing 0, 1, 2 or} \\ & \text{3 atoms selected from O, N and S that is optionally vicinally fused with a} \\ & \text{saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected} \\ & \text{from O, N and S with the remaining atoms being carbon, so long as the} \\ & \text{15 combination of O and S atoms is not greater than 2, wherein the ring and bridge} \\ & \text{are substituted by 0, 1, 2 or 3 substituents independently selected from C}_{1\text{-}8}\text{alkyl,} \\ & \text{C}_{1\text{-}4}\text{haloalkyl, halo, cyano, nitro, -C(=O)R}^{\text{n}}, \text{-C(=O)OR}^{\text{n}}, \text{-C(=O)NR}^{\text{m}}\text{R}^{\text{m}}, \\ & \text{-C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{m}}, \text{-OR}^{\text{m}}, \text{-OC(=O)R}^{\text{n}}, \text{-OC(=O)NR}^{\text{m}}\text{R}^{\text{m}}, \\ & \text{-OC(=O)N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{n}}, \text{-OC}_{2\text{-}6}\text{alkylNR}^{\text{m}}\text{R}^{\text{m}}, \text{-OC}_{2\text{-}6}\text{alkylOR}^{\text{m}}, \text{-SR}^{\text{m}}, \text{-S(=O)R}^{\text{n}}, \\ & \text{20} \quad \text{-S(=O)}_2\text{R}^{\text{n}}, \text{-S(=O)}_2\text{NR}^{\text{m}}\text{R}^{\text{m}}, \text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)R}^{\text{n}}, \text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)OR}^{\text{n}}, \\ & \text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{m}}, \text{-NR}^{\text{m}}\text{R}^{\text{m}}, \text{-N(R}^{\text{m}}\text{)C(=O)R}^{\text{n}}, \text{-N(R}^{\text{m}}\text{)C(=O)OR}^{\text{n}}, \\ & \text{-N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{m}}, \text{-N(R}^{\text{m}}\text{)C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{m}}, \text{-N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{n}}, \\ & \text{-N(R}^{\text{m}}\text{)S(=O)}_2\text{NR}^{\text{m}}\text{R}^{\text{m}}, \text{-NR}^{\text{m}}\text{C}_{2\text{-}6}\text{alkylNR}^{\text{m}}\text{R}^{\text{m}}, \text{-NR}^{\text{m}}\text{C}_{2\text{-}6}\text{alkylOR}^{\text{m}}, \text{-C(=O)R}^{\text{s}}, \\ & \text{-C(=O)OR}^{\text{s}}, \text{-C(=O)NR}^{\text{m}}\text{R}^{\text{s}}, \text{-C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{s}}, \text{-OR}^{\text{s}}, \text{-OC(=O)R}^{\text{s}}, \\ & \text{25} \quad \text{-OC(=O)NR}^{\text{m}}\text{R}^{\text{s}}, \text{-OC(=O)N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{s}}, \text{-OC}_{2\text{-}6}\text{alkylNR}^{\text{m}}\text{R}^{\text{s}}, \text{-OC}_{2\text{-}6}\text{alkylOR}^{\text{s}}, \\ & \text{-SR}^{\text{s}}, \text{-S(=O)R}^{\text{s}}, \text{-S(=O)}_2\text{R}^{\text{s}}, \text{-S(=O)}_2\text{NR}^{\text{m}}\text{R}^{\text{s}}, \text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)R}^{\text{s}}, \\ & \text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)OR}^{\text{s}}, \text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{s}}, \text{-NR}^{\text{m}}\text{R}^{\text{s}}, \text{-N(R}^{\text{m}}\text{)C(=O)R}^{\text{s}}, \\ & \text{-N(R}^{\text{m}}\text{)C(=O)OR}^{\text{s}}, \text{-N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{s}}, \text{-N(R}^{\text{m}}\text{)C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{s}}, \\ & \text{-N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{s}}, \text{-N(R}^{\text{m}}\text{)S(=O)}_2\text{NR}^{\text{m}}\text{R}^{\text{s}}, \text{-NR}^{\text{m}}\text{C}_{2\text{-}6}\text{alkylNR}^{\text{m}}\text{R}^{\text{s}}, \text{-NR}^{\text{m}}\text{C}_{2\text{-}6}\text{alkylOR}^{\text{s}}, \\ & \text{30} \quad \text{and C}_{1\text{-}4}\text{alkyl substituted by 1 or 2 groups selected from C}_{1\text{-}2}\text{haloalkyl, halo,} \\ & \text{cyano, nitro, -C(=O)R}^{\text{n}}, \text{-C(=O)OR}^{\text{n}}, \text{-C(=O)NR}^{\text{m}}\text{R}^{\text{m}}, \text{-C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{m}}, \text{-OR}^{\text{m}}, \\ & \text{-OC(=O)R}^{\text{n}}, \text{-OC(=O)NR}^{\text{m}}\text{R}^{\text{m}}, \text{-OC(=O)N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{n}}, \text{-OC}_{2\text{-}6}\text{alkylNR}^{\text{m}}\text{R}^{\text{m}}, \end{aligned}$

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- OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- 5 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,
- OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>,
- OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- 10 -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, and the ring and bridge carbon atoms are substituted with 0, 1 or 2 =O groups;

R<sup>7</sup> is C<sub>2-8</sub>alkyl, C<sub>1-3</sub>haloalkyl, I, Br;

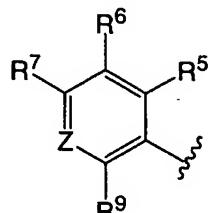
R<sup>9</sup> is independently, at each instance, H, C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo,

- 15 nitro, cyano, -OC<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>,
- O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or
- NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>;

Y is NH; and

Z is CR<sup>8</sup> or N; or

- 20 (E) R<sup>1</sup> is



R<sup>2</sup> is H, -OR<sup>m</sup>, Cl, C<sub>1-3</sub>haloalkyl or C<sub>1-6</sub>alkyl;

- 25 R<sup>4</sup> is a saturated or unsaturated 5- or 6-membered ring containing 0, 1, 2 or 3 atoms selected from O, N and S, so long as the combination of O and S atoms is not greater than 1, wherein the ring is substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>n</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>,

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$\text{-S(=O)}_2\text{NR}^m\text{R}^m$ ,  $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)R}^n$ ,  $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)OR}^n$ ,  
 $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)NR}^m\text{R}^m$ ,  $\text{-NR}^m\text{R}^m$ ,  $\text{-N(R}^m\text{)C(=O)R}^n$ ,  $\text{-N(R}^m\text{)C(=O)OR}^n$ ,  
 $\text{-N(R}^m\text{)C(=O)NR}^m\text{R}^m$ ,  $\text{-N(R}^m\text{)C(=NR}^m\text{)NR}^m\text{R}^m$ ,  $\text{-N(R}^m\text{)S(=O)}_2\text{R}^n$ ,  
 $\text{-N(R}^m\text{)S(=O)}_2\text{NR}^m\text{R}^m$ ,  $\text{-NR}^m\text{C}_{2-6}\text{alkylNR}^m\text{R}^m$ ,  $\text{-NR}^m\text{C}_{2-6}\text{alkylOR}^m$ ,  $\text{-C(=O)R}^s$ ,  
5     $\text{-C(=O)OR}^s$ ,  $\text{-C(=O)NR}^m\text{R}^s$ ,  $\text{-C(=NR}^m\text{)NR}^m\text{R}^s$ ,  $\text{-OR}^s$ ,  $\text{-OC(=O)R}^s$ ,  
 $\text{-OC(=O)NR}^m\text{R}^s$ ,  $\text{-OC(=O)N(R}^m\text{)S(=O)}_2\text{R}^s$ ,  $\text{-OC}_{2-6}\text{alkylNR}^m\text{R}^s$ ,  $\text{-OC}_{2-6}\text{alkylOR}^s$ ,  
 $\text{-SR}^s$ ,  $\text{-S(=O)}_2\text{R}^s$ ,  $\text{-S(=O)}_2\text{NR}^m\text{R}^s$ ,  $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)R}^s$ ,  
 $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)OR}^s$ ,  $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)NR}^m\text{R}^s$ ,  $\text{-NR}^m\text{R}^s$ ,  $\text{-N(R}^m\text{)C(=O)R}^s$ ,  
10    $\text{-N(R}^m\text{)C(=O)OR}^s$ ,  $\text{-N(R}^m\text{)C(=O)NR}^m\text{R}^s$ ,  $\text{-NR}^m\text{C}_{2-6}\text{alkylNR}^m\text{R}^s$ ,  $\text{-NR}^m\text{C}_{2-6}\text{alkylOR}^s$   
and  $\text{C}_{1-4}\text{alkyl}$  substituted by 1 or 2 groups selected from  $\text{C}_{1-2}\text{haloalkyl}$ , halo,  
cyano, nitro,  $\text{-C(=O)R}^n$ ,  $\text{-C(=O)NR}^m\text{R}^m$ ,  $\text{-C(=NR}^m\text{)NR}^m\text{R}^m$ ,  $\text{-OR}^m$ ,  $\text{-OC(=O)R}^n$ ,  
 $\text{-OC(=O)NR}^m\text{R}^m$ ,  $\text{-OC(=O)N(R}^m\text{)S(=O)}_2\text{R}^n$ ,  $\text{-OC}_{2-6}\text{alkylNR}^m\text{R}^m$ ,  $\text{-OC}_{2-6}\text{alkylOR}^m$ ,  
 $\text{-SR}^m$ ,  $\text{-S(=O)}_2\text{R}^n$ ,  $\text{-S(=O)}_2\text{R}^s$ ,  $\text{-S(=O)}_2\text{NR}^m\text{R}^m$ ,  $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)R}^n$ ,  
15    $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)OR}^n$ ,  $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)NR}^m\text{R}^m$ ,  $\text{-NR}^m\text{R}^m$ ,  
 $\text{-N(R}^m\text{)C(=O)R}^n$ ,  $\text{-N(R}^m\text{)C(=O)OR}^n$ ,  $\text{-N(R}^m\text{)C(=O)NR}^m\text{R}^m$ ,  
 $\text{-N(R}^m\text{)C(=NR}^m\text{)NR}^m\text{R}^m$ ,  $\text{-N(R}^m\text{)S(=O)}_2\text{R}^n$ ,  $\text{-N(R}^m\text{)S(=O)}_2\text{NR}^m\text{R}^m$ ,  
 $\text{-NR}^m\text{C}_{2-6}\text{alkylNR}^m\text{R}^m$ ,  $\text{-C(=O)R}^s$ ,  $\text{-C(=O)OR}^s$ ,  $\text{-C(=O)NR}^m\text{R}^s$ ,  $\text{-C(=NR}^m\text{)NR}^m\text{R}^s$ ,  
20    $\text{-OR}^s$ ,  $\text{-OC(=O)R}^s$ ,  $\text{-OC(=O)NR}^m\text{R}^s$ ,  $\text{-OC(=O)N(R}^m\text{)S(=O)}_2\text{R}^s$ ,  $\text{-OC}_{2-6}\text{alkylNR}^m\text{R}^s$ ,  
 $\text{-OC}_{2-6}\text{alkylOR}^s$ ,  $\text{-SR}^s$ ,  $\text{-S(=O)}_2\text{R}^s$ ,  $\text{-S(=O)}_2\text{NR}^m\text{R}^s$ ,  
 $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)R}^s$ ,  $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)OR}^s$ ,  $\text{-S(=O)}_2\text{N(R}^m\text{)C(=O)NR}^m\text{R}^s$ ,  
 $\text{-NR}^m\text{R}^s$ ,  $\text{-N(R}^m\text{)C(=O)R}^s$ ,  $\text{-N(R}^m\text{)C(=O)OR}^s$ ,  $\text{-N(R}^m\text{)C(=O)NR}^m\text{R}^s$ ,  
 $\text{-N(R}^m\text{)C(=NR}^m\text{)NR}^m\text{R}^s$ ,  $\text{-N(R}^m\text{)S(=O)}_2\text{R}^s$ ,  $\text{-N(R}^m\text{)S(=O)}_2\text{NR}^m\text{R}^s$ ,  
25    $\text{-NR}^m\text{C}_{2-6}\text{alkylNR}^m\text{R}^s$ ,  $\text{-NR}^m\text{C}_{2-6}\text{alkylOR}^s$  and  $\text{-NR}^m\text{C}_{2-6}\text{alkylOR}^m$ ; wherein  $\text{R}^4$  is  
not unsubstituted phenyl;

$\text{R}^7$  is  $\text{C}_{2-6}\text{alkyl}$ ,  $\text{C}_{1-4}\text{haloalkyl}$ , I or Br;

$\text{R}^9$  is independently, at each instance, H,  $\text{C}_{1-9}\text{alkyl}$ ,  $\text{C}_{1-4}\text{haloalkyl}$ , halo,  
nitro, cyano,  $\text{-OC}_{1-6}\text{alkyl}$ ,  $\text{-O-C}_{1-4}\text{haloalkyl}$ ,  $\text{-O-C}_{1-6}\text{alkylNR}^m\text{R}^m$ ,

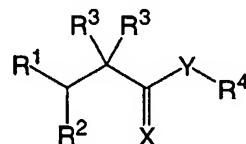
$\text{-O-C}_{1-6}\text{alkylOR}^m$ ,  $\text{-NR}^m\text{R}^m$ ,  $\text{-NR}^m\text{-C}_{1-4}\text{haloalkyl}$ ,  $\text{-NR}^m\text{-C}_{1-6}\text{alkylNR}^m\text{R}^m$  or

30    $\text{-NR}^m\text{-C}_{1-6}\text{alkylOR}^m$ ;

Y is NH; and

Z is CR<sup>8</sup> or N.

173. The manufacture of a medicament for the treatment of acute, inflammatory and neuropathic pain, dental pain, general headache, migraine, cluster headache, mixed-vascular and non-vascular syndromes, tension headache,  
5 general inflammation, arthritis, rheumatic diseases, osteoarthritis, inflammatory bowel disorders, inflammatory eye disorders, inflammatory or unstable bladder disorders, psoriasis, skin complaints with inflammatory components, chronic inflammatory conditions, inflammatory pain and associated hyperalgesia and allodynia, neuropathic pain and associated hyperalgesia and allodynia, diabetic neuropathy pain, causalgia, sympathetically maintained pain, deafferentation syndromes, asthma, epithelial tissue damage or dysfunction, herpes simplex, disturbances of visceral motility at respiratory, genitourinary, gastrointestinal or vascular regions, wounds, burns, allergic skin reactions, pruritis, vitiligo, general gastrointestinal disorders, gastric ulceration, duodenal ulcers, diarrhea, gastric  
10 lesions induced by necrotising agents, hair growth, vasomotor or allergic rhinitis, bronchial disorders or bladder disorders, wherein the medicament contains a compound having the structure:  
15



wherein:

20        X is O, S or NR<sup>m</sup>;

      n is independently, at each instance, 0, 1 or 2;

      o is independently, at each instance, 0, 1, 2 or 3;

      R<sup>m</sup> is independently at each instance H or R<sup>n</sup>;

      R<sup>n</sup> is independently at each instance C<sub>1-8</sub>alkyl, phenyl or benzyl;

25        R<sup>q</sup> is independently in each instance H, C<sub>1-4</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,

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-N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,  
-NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>;

R<sup>s</sup> is R<sup>n</sup> substituted by 0, 1, 2 or 3 substituents independently selected from R<sup>q</sup>:

5 R<sup>3</sup> is H or C<sub>1-4</sub>alkyl;

R<sup>5</sup> is H, C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OC<sub>1-6</sub>alkyl,

-O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>,

-NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>, or -(CH<sub>2</sub>)<sub>n</sub>R<sup>c</sup>

10 R<sup>6</sup> is, independently at each instance, H, C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo,

nitro, cyano, -OC<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>,

-O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or

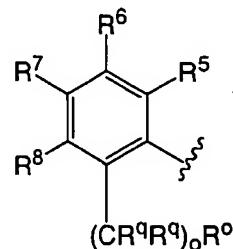
-NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>;

15 R<sup>8</sup> is H, C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OC<sub>1-6</sub>alkyl,

-O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>,

15 R<sup>15</sup> -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>; and

(A) R<sup>1</sup> is



R<sup>2</sup> is H, -OR<sup>m</sup>, halo, C<sub>1-3</sub>haloalkyl or C<sub>1-6</sub>alkyl;

20 R<sup>4</sup> is a saturated or unsaturated 5- or 6-membered ring containing 0, 1, 2 or 3 atoms selected from O, N and S that is optionally vicinally fused with a

saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected from O, N and S with the remaining atoms being carbon, so long as the

combination of O and S atoms is not greater than 2, wherein the ring and bridge are substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-8</sub>alkyl,

25 C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>,

-C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>,

-OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>,

-S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>,

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- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>,
- N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>,
- N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>,
- C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>,
- 5 -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>,
- SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>,
- N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,
- N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup>
- 10 and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo,
- cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>,
- OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>,
- OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- 15 -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,
- OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>,
- OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- 20 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; and the ring
- and bridge carbon atoms are substituted with 0, 1 or 2 =O groups;
- 25 R<sup>7</sup> is C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OC<sub>1-6</sub>alkyl,
- O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>,
- NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>;

R<sup>9</sup> is a saturated, partially-saturated or unsaturated 5-, 6- or 7-membered monocyclic or 7-, 8-, 9-, 10- or 11-membered bicyclic ring containing 0, 1, 2, 3 or

30 4 atoms selected from N, O and S, so long as the combination of O and S atoms is not greater than 2, wherein the carbon atoms of the ring are substituted by 0, 1 or

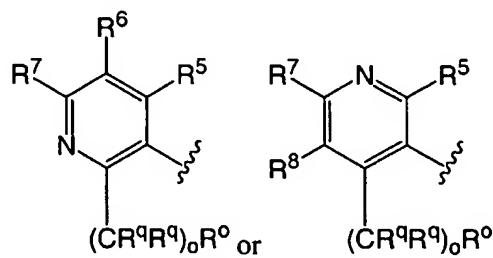
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2 oxo groups, wherein the ring is substituted by 0, 1, 2 or 3 substituents independently selected from R<sup>p</sup>;

R<sup>p</sup> is independently at each instance C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; and

Y is O or NH; or

(B) R<sup>1</sup> is



R<sup>2</sup> is H, -OR<sup>m</sup>, halo, C<sub>1-3</sub>haloalkyl or C<sub>1-6</sub>alkyl;

R<sup>4</sup> is a saturated or unsaturated 5- or 6-membered ring containing 0, 1, 2 or 3 atoms selected from O, N and S that is optionally vicinally fused with a saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected from O, N and S with the remaining atoms being carbon, so long as the combination of O and S atoms is not greater than 2, wherein the ring and bridge are substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>,

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- OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>,
- SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>,
- N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,
- 5 -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup>  
and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo,  
cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>,
- OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>,
- OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- 10 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,
- OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>,
- 15 -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; and the ring  
20 and bridge carbon atoms are substituted with 0, 1 or 2 =O groups;

R<sup>7</sup> is C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OC<sub>1-6</sub>alkyl,  
-O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>,  
-NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>;

R<sup>9</sup> is a saturated, partially-saturated or unsaturated 5-, 6- or 7-membered  
25 monocyclic or 7-, 8-, 9-, 10- or 11-membered bicyclic ring containing 0, 1, 2, 3 or  
4 atoms selected from N, O and S, so long as the combination of O and S atoms is  
not greater than 2, wherein the carbon atoms of the ring are substituted by 0, 1 or  
2 oxo groups, wherein the ring is substituted by 0, 1, 2 or 3 substituents  
independently selected from R<sup>P</sup>;

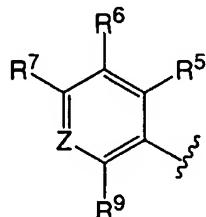
30 R<sup>P</sup> is independently at each instance C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano,  
nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>,  
-OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>,

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- OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- 5 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; and

Y is O or NH; or

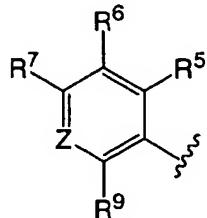
(C) R<sup>1</sup> is



- R<sup>2</sup> is H, -OR<sup>m</sup>, halo, C<sub>1-3</sub>haloalkyl or C<sub>1-6</sub>alkyl;
- 10 R<sup>4</sup> is a saturated, partially-saturated or unsaturated 8-, 9-, 10 or 11-membered bicyclic heterocycle containing 1, 2, 3, 4 or 5 atoms selected from O, N and S, so long as the combination of O and S atoms is not greater than 2, but excluding quinolin-6-yl, 4,5,6,7-tetrahydro-benzo[b]thiophen-2-yl, benzothiazol-2-yl, 2,3-dihydro-benzo[1,4]dioxin-6-yl, wherein the heterocycle is substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-9</sub>alkyl, oxo, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OR<sup>m</sup>, -S(=O)<sub>n</sub>C<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>, -C(=O)C<sub>1-6</sub>alkyl, -OC(=O)C<sub>1-6</sub>alkyl, -C(=O)NR<sup>m</sup>C<sub>1-6</sub>alkyl, -NR<sup>m</sup>C(=O)C<sub>1-6</sub>alkyl -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,
- 15 -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- 20 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>,
- 25 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>,

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- S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>,
- N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>,
- N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,
- 5 -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>,
- OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- 10 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; wherein R<sup>4</sup> is not 2-aminocarbonylmethyl-2,3-dihydro-benzo[1,4]dioxin-8-yl, 2-cyanomethyl-2,3-dihydro-benzo[1,4]dioxin-8-yl, quinolin-3-yl, 3H-quinazolin-4-on-3-yl, benzo[1,3]dioxol-5-yl, 3,3-dimethyl-1,3-dihydro-indol-2-on-6-yl or 4,4-dimethyl-3,4-dihydro-1H-quinolin-2-on-7-yl;
- 15 R<sup>7</sup> is C<sub>1-8</sub>alkyl, C<sub>1-5</sub>haloalkyl, I or Br
- R<sup>9</sup> is H, C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OC<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>, or -(CH<sub>2</sub>)<sub>n</sub>R<sup>c</sup>;
- R<sup>9</sup> is independently, at each instance, H, C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OC<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>;
- 20 Y is NH; and
- Z is CR<sup>8</sup> or N; or
- 25 (D) R<sup>1</sup> is



R<sup>2</sup> is C<sub>1-6</sub>alkyl substituted by 1, 2 or 3 substituents selected from

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$C_{1-4}$ haloalkyl, halo, cyano, nitro,  $-C(=O)R^n$ ,  $-C(=O)OR^n$ ,  $-C(=O)NR^mR^m$ ,  
 $-C(=NR^m)NR^mR^m$ ,  $-OR^m$ ,  $-OC(=O)R^n$ ,  $-OC(=O)NR^mR^m$ ,  
 $-OC(=O)N(R^m)S(=O)R^n$ ,  $-OC_{2-6}alkylNR^mR^m$ ,  $-OC_{2-6}alkylOR^m$ ,  $-SR^m$ ,  $-S(=O)R^n$ ,  
 $-S(=O)_2R^n$ ,  $-S(=O)_2NR^mR^m$ ,  $-S(=O)_2N(R^m)C(=O)R^n$ ,  $-S(=O)_2N(R^m)C(=O)OR^n$ ,  
5     $-S(=O)_2N(R^m)C(=O)NR^mR^m$ ,  $-NR^mR^m$ ,  $-N(R^m)C(=O)R^n$ ,  $-N(R^m)C(=O)OR^n$ ,  
 $-N(R^m)C(=O)NR^mR^m$ ,  $-N(R^m)C(=NR^m)NR^mR^m$ ,  $-N(R^m)S(=O)R^n$ ,  
 $-N(R^m)S(=O)_2NR^mR^m$ ,  $-NR^mC_{2-6}alkylNR^mR^m$  or  $-NR^mC_{2-6}alkylOR^m$ ; or  
 $R^2$  is  $-(C(R^q)_2)phenyl$ , wherein the phenyl is substituted by 0, 1, 2 or 3  
 substituents independently selected from  $C_{1-8}$ alkyl,  $C_{1-4}$ haloalkyl, halo, cyano,  
10    nitro,  $-C(=O)R^n$ ,  $-C(=O)OR^n$ ,  $-C(=O)NR^mR^m$ ,  $-C(=NR^m)NR^mR^m$ ,  $-OR^m$ ,  
 $-OC(=O)R^n$ ,  $-OC(=O)NR^mR^m$ ,  $-OC(=O)N(R^m)S(=O)R^n$ ,  $-OC_{2-6}alkylNR^mR^m$ ,  
 $-OC_{2-6}alkylOR^m$ ,  $-SR^m$ ,  $-S(=O)R^n$ ,  $-S(=O)_2R^n$ ,  $-S(=O)_2NR^mR^m$ ,  
 $-S(=O)_2N(R^m)C(=O)R^n$ ,  $-S(=O)_2N(R^m)C(=O)OR^n$ ,  $-S(=O)_2N(R^m)C(=O)NR^mR^m$ ,  
 $-NR^mR^m$ ,  $-N(R^m)C(=O)R^n$ ,  $-N(R^m)C(=O)OR^n$ ,  $-N(R^m)C(=O)NR^mR^m$ ,  
15     $-N(R^m)C(=NR^m)NR^mR^m$ ,  $-N(R^m)S(=O)R^n$ ,  $-N(R^m)S(=O)_2NR^mR^m$ ,  
 $-NR^mC_{2-6}alkylNR^mR^m$ ,  $-NR^mC_{2-6}alkylOR^m$ ,  $-C(=O)R^s$ ,  $-C(=O)OR^s$ ,  
 $-C(=O)NR^mR^s$ ,  $-C(=NR^m)NR^mR^s$ ,  $-OR^s$ ,  $-OC(=O)R^s$ ,  $-OC(=O)NR^mR^s$ ,  
 $-OC(=O)N(R^m)S(=O)R^s$ ,  $-OC_{2-6}alkylNR^mR^s$ ,  $-OC_{2-6}alkylOR^s$ ,  $-SR^s$ ,  $-S(=O)R^s$ ,  
 $-S(=O)_2R^s$ ,  $-S(=O)_2NR^mR^s$ ,  $-S(=O)_2N(R^m)C(=O)R^s$ ,  $-S(=O)_2N(R^m)C(=O)OR^s$ ,  
20     $-S(=O)_2N(R^m)C(=O)NR^mR^s$ ,  $-NR^mR^s$ ,  $-N(R^m)C(=O)R^s$ ,  $-N(R^m)C(=O)OR^s$ ,  
 $-N(R^m)C(=O)NR^mR^s$ ,  $-N(R^m)C(=NR^m)NR^mR^s$ ,  $-N(R^m)S(=O)R^s$ ,  
 $-N(R^m)S(=O)_2NR^mR^s$ ,  $-NR^mC_{2-6}alkylNR^mR^s$ ,  $-NR^mC_{2-6}alkylOR^s$  and  $C_{1-4}$ alkyl  
 substituted by 1 or 2 groups selected from  $C_{1-2}$ haloalkyl, halo, cyano, nitro,  
 $-C(=O)R^n$ ,  $-C(=O)OR^n$ ,  $-C(=O)NR^mR^m$ ,  $-C(=NR^m)NR^mR^m$ ,  $-OR^m$ ,  $-OC(=O)R^n$ ,  
25     $-OC(=O)NR^mR^m$ ,  $-OC(=O)N(R^m)S(=O)R^n$ ,  $-OC_{2-6}alkylNR^mR^m$ ,  $-OC_{2-6}alkylOR^m$ ,  
 $-SR^m$ ,  $-S(=O)R^n$ ,  $-S(=O)_2R^n$ ,  $-S(=O)_2NR^mR^m$ ,  $-S(=O)_2N(R^m)C(=O)R^n$ ,  
 $-S(=O)_2N(R^m)C(=O)OR^n$ ,  $-S(=O)_2N(R^m)C(=O)NR^mR^m$ ,  $-NR^mR^m$ ,  
 $-N(R^m)C(=O)R^n$ ,  $-N(R^m)C(=O)OR^n$ ,  $-N(R^m)C(=O)NR^mR^m$ ,  
 $-N(R^m)C(=NR^m)NR^mR^m$ ,  $-N(R^m)S(=O)R^n$ ,  $-N(R^m)S(=O)_2NR^mR^m$ ,  
30     $-NR^mC_{2-6}alkylNR^mR^m$ ,  $-C(=O)R^s$ ,  $-C(=O)OR^s$ ,  $-C(=O)NR^mR^s$ ,  $-C(=NR^m)NR^mR^s$ ,  
 $-OR^s$ ,  $-OC(=O)R^s$ ,  $-OC(=O)NR^mR^s$ ,  $-OC(=O)N(R^m)S(=O)R^s$ ,  $-OC_{2-6}alkylNR^mR^s$ ,  
 $-OC_{2-6}alkylOR^s$ ,  $-SR^s$ ,  $-S(=O)R^s$ ,  $-S(=O)_2R^s$ ,  $-S(=O)_2NR^mR^s$ ,

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- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; or
- 5 R<sup>2</sup> is -(C(R<sup>q</sup>)<sub>2</sub>)<sub>0</sub>R<sup>r</sup>, wherein R<sup>r</sup> is a saturated or unsaturated 5- or 6-membered ring heterocycle containing 1, 2 or 3 heteroatoms independently selected from N, O and S, wherein no more than 2 of the ring members are O or S, wherein the heterocycle is optionally fused with a phenyl ring, and the heterocycle or fused phenyl ring is substituted by 0, 1, 2 or 3 substituents independently selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>,
- 10 -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>,
- 15 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>,
- 20 -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>,
- 25 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)OR<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>,
- 30 -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,

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$\text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)R}^{\text{s}}$ ,  $\text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)OR}^{\text{s}}$ ,  $\text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  
 $\text{-NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $\text{-N(R}^{\text{m}}\text{)C(=O)R}^{\text{s}}$ ,  $\text{-N(R}^{\text{m}}\text{)C(=O)OR}^{\text{s}}$ ,  $\text{-N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  
 $\text{-N(R}^{\text{m}}\text{)C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $\text{-N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{s}}$ ,  $\text{-N(R}^{\text{m}}\text{)S(=O)}_2\text{NR}^{\text{m}}\text{R}^{\text{s}}$ ,  
 $\text{-NR}^{\text{m}}\text{C}_{2\text{-6alkyl}}\text{NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $\text{-NR}^{\text{m}}\text{C}_{2\text{-6alkyl}}\text{OR}^{\text{s}}$  and  $\text{-NR}^{\text{m}}\text{C}_{2\text{-6alkyl}}\text{OR}^{\text{m}}$ ;  
  
 5            $\text{R}^{\text{4}}$  is a saturated or unsaturated 5- or 6-membered ring containing 0, 1, 2 or  
 3 atoms selected from O, N and S that is optionally vicinally fused with a  
 saturated or unsaturated 3- or 4-atom bridge containing 0, 1, 2 or 3 atoms selected  
 from O, N and S with the remaining atoms being carbon, so long as the  
 combination of O and S atoms is not greater than 2, wherein the ring and bridge  
 10          are substituted by 0, 1, 2 or 3 substituents independently selected from  $\text{C}_{1\text{-8alkyl}}$ ,  
 $\text{C}_{1\text{-4haloalkyl}}$ , halo, cyano, nitro,  $\text{-C(=O)R}^{\text{n}}$ ,  $\text{-C(=O)OR}^{\text{n}}$ ,  $\text{-C(=O)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  
 $\text{-C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $\text{-OR}^{\text{m}}$ ,  $\text{-OC(=O)R}^{\text{n}}$ ,  $\text{-OC(=O)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  
 $\text{-OC(=O)N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{n}}$ ,  $\text{-OC}_{2\text{-6alkyl}}\text{NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $\text{-OC}_{2\text{-6alkyl}}\text{OR}^{\text{m}}$ ,  $\text{-SR}^{\text{m}}$ ,  $\text{-S(=O)R}^{\text{n}}$ ,  
 $\text{-S(=O)}_2\text{R}^{\text{n}}$ ,  $\text{-S(=O)}_2\text{NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $\text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)R}^{\text{n}}$ ,  $\text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)OR}^{\text{n}}$ ,  
 15           $\text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $\text{-NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $\text{-N(R}^{\text{m}}\text{)C(=O)R}^{\text{n}}$ ,  $\text{-N(R}^{\text{m}}\text{)C(=O)OR}^{\text{n}}$ ,  
 $\text{-N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $\text{-N(R}^{\text{m}}\text{)C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $\text{-N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{n}}$ ,  
 $\text{-N(R}^{\text{m}}\text{)S(=O)}_2\text{NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $\text{-NR}^{\text{m}}\text{C}_{2\text{-6alkyl}}\text{NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $\text{-NR}^{\text{m}}\text{C}_{2\text{-6alkyl}}\text{OR}^{\text{m}}$ ,  $\text{-C(=O)R}^{\text{s}}$ ,  
 $\text{-C(=O)OR}^{\text{s}}$ ,  $\text{-C(=O)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $\text{-C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $\text{-OR}^{\text{s}}$ ,  $\text{-OC(=O)R}^{\text{s}}$ ,  
 $\text{-OC(=O)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $\text{-OC(=O)N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{s}}$ ,  $\text{-OC}_{2\text{-6alkyl}}\text{NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $\text{-OC}_{2\text{-6alkyl}}\text{OR}^{\text{s}}$ ,  
 20           $\text{-SR}^{\text{s}}$ ,  $\text{-S(=O)R}^{\text{s}}$ ,  $\text{-S(=O)}_2\text{R}^{\text{s}}$ ,  $\text{-S(=O)}_2\text{NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $\text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)R}^{\text{s}}$ ,  
 $\text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)OR}^{\text{s}}$ ,  $\text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $\text{-NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $\text{-N(R}^{\text{m}}\text{)C(=O)R}^{\text{s}}$ ,  
 $\text{-N(R}^{\text{m}}\text{)C(=O)OR}^{\text{s}}$ ,  $\text{-N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $\text{-N(R}^{\text{m}}\text{)C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  
 $\text{-N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{s}}$ ,  $\text{-N(R}^{\text{m}}\text{)S(=O)}_2\text{NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $\text{-NR}^{\text{m}}\text{C}_{2\text{-6alkyl}}\text{NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $\text{-NR}^{\text{m}}\text{C}_{2\text{-6alkyl}}\text{OR}^{\text{s}}$   
 and  $\text{C}_{1\text{-4alkyl}}$  substituted by 1 or 2 groups selected from  $\text{C}_{1\text{-2haloalkyl}}$ , halo,  
 25          cyano, nitro,  $\text{-C(=O)R}^{\text{n}}$ ,  $\text{-C(=O)OR}^{\text{n}}$ ,  $\text{-C(=O)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $\text{-C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $\text{-OR}^{\text{m}}$ ,  
 $\text{-OC(=O)R}^{\text{n}}$ ,  $\text{-OC(=O)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $\text{-OC(=O)N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{n}}$ ,  $\text{-OC}_{2\text{-6alkyl}}\text{NR}^{\text{m}}\text{R}^{\text{m}}$ ,  
 $\text{-OC}_{2\text{-6alkyl}}\text{OR}^{\text{m}}$ ,  $\text{-SR}^{\text{m}}$ ,  $\text{-S(=O)R}^{\text{n}}$ ,  $\text{-S(=O)}_2\text{R}^{\text{n}}$ ,  $\text{-S(=O)}_2\text{NR}^{\text{m}}\text{R}^{\text{m}}$ ,  
 $\text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)R}^{\text{n}}$ ,  $\text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)OR}^{\text{n}}$ ,  $\text{-S(=O)}_2\text{N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  
 $\text{-NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $\text{-N(R}^{\text{m}}\text{)C(=O)R}^{\text{n}}$ ,  $\text{-N(R}^{\text{m}}\text{)C(=O)OR}^{\text{n}}$ ,  $\text{-N(R}^{\text{m}}\text{)C(=O)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  
 30           $\text{-N(R}^{\text{m}}\text{)C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $\text{-N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{n}}$ ,  $\text{-N(R}^{\text{m}}\text{)S(=O)}_2\text{NR}^{\text{m}}\text{R}^{\text{m}}$ ,  
 $\text{-NR}^{\text{m}}\text{C}_{2\text{-6alkyl}}\text{NR}^{\text{m}}\text{R}^{\text{m}}$ ,  $\text{-C(=O)R}^{\text{s}}$ ,  $\text{-C(=O)OR}^{\text{s}}$ ,  $\text{-C(=O)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $\text{-C(=NR}^{\text{m}}\text{)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  
 $\text{-OR}^{\text{s}}$ ,  $\text{-OC(=O)R}^{\text{s}}$ ,  $\text{-OC(=O)NR}^{\text{m}}\text{R}^{\text{s}}$ ,  $\text{-OC(=O)N(R}^{\text{m}}\text{)S(=O)}_2\text{R}^{\text{s}}$ ,  $\text{-OC}_{2\text{-6alkyl}}\text{NR}^{\text{m}}\text{R}^{\text{s}}$ ,

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- OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- 5 -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, and the ring and bridge carbon atoms are substituted with 0, 1 or 2 =O groups;

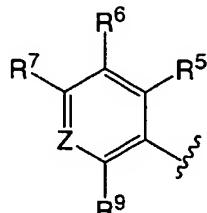
R<sup>7</sup> is C<sub>2-8</sub>alkyl, C<sub>1-5</sub>haloalkyl, I, Br;

- R<sup>9</sup> is independently, at each instance, H, C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OC<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>,
- 10 -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>;

Y is NH; and

Z is CR<sup>8</sup> or N; or

(E) R<sup>1</sup> is



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R<sup>2</sup> is H, -OR<sup>m</sup>, Cl, C<sub>1-3</sub>haloalkyl or C<sub>1-6</sub>alkyl;

- R<sup>4</sup> is a saturated or unsaturated 5- or 6-membered ring containing 0, 1, 2 or 3 atoms selected from O, N and S, so long as the combination of O and S atoms is not greater than 1, wherein the ring is substituted by 0, 1, 2 or 3 substituents
- 20 independently selected from C<sub>1-8</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, cyano, nitro, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>n</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>, -SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -OC<sub>2-6</sub>alkylOR<sup>s</sup>,
- 25

- 609 -

- SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>,
- N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,
- N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup>
- 5 and C<sub>1-4</sub>alkyl substituted by 1 or 2 groups selected from C<sub>1-2</sub>haloalkyl, halo, cyano, nitro, -C(=O)R<sup>n</sup>, -C(=O)NR<sup>m</sup>R<sup>m</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -OR<sup>m</sup>, -OC(=O)R<sup>n</sup>, -OC(=O)NR<sup>m</sup>R<sup>m</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -OC<sub>2-6</sub>alkylOR<sup>m</sup>,
- SR<sup>m</sup>, -S(=O)R<sup>n</sup>, -S(=O)<sub>2</sub>R<sup>n</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>n</sup>,
- S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>,
- 10 -N(R<sup>m</sup>)C(=O)R<sup>n</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>n</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>m</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>m</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>n</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>m</sup>,
- NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -C(=O)R<sup>s</sup>, -C(=O)OR<sup>s</sup>, -C(=O)NR<sup>m</sup>R<sup>s</sup>, -C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>,
- OR<sup>s</sup>, -OC(=O)R<sup>s</sup>, -OC(=O)NR<sup>m</sup>R<sup>s</sup>, -OC(=O)N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -OC<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>,
- OC<sub>2-6</sub>alkylOR<sup>s</sup>, -SR<sup>s</sup>, -S(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>R<sup>s</sup>, -S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- 15 -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -S(=O)<sub>2</sub>N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)R<sup>s</sup>, -N(R<sup>m</sup>)C(=O)OR<sup>s</sup>, -N(R<sup>m</sup>)C(=O)NR<sup>m</sup>R<sup>s</sup>,
- N(R<sup>m</sup>)C(=NR<sup>m</sup>)NR<sup>m</sup>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>R<sup>s</sup>, -N(R<sup>m</sup>)S(=O)<sub>2</sub>NR<sup>m</sup>R<sup>s</sup>,
- NR<sup>m</sup>C<sub>2-6</sub>alkylNR<sup>m</sup>R<sup>s</sup>, -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>s</sup> and -NR<sup>m</sup>C<sub>2-6</sub>alkylOR<sup>m</sup>; wherein R<sup>4</sup> is not unsubstituted phenyl;
- 20 R<sup>7</sup> is C<sub>2-6</sub>alkyl, C<sub>1-5</sub>haloalkyl, I or Br;
- R<sup>9</sup> is independently, at each instance, H, C<sub>1-9</sub>alkyl, C<sub>1-4</sub>haloalkyl, halo, nitro, cyano, -OC<sub>1-6</sub>alkyl, -O-C<sub>1-4</sub>haloalkyl, -O-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup>, -O-C<sub>1-6</sub>alkylOR<sup>m</sup>, -NR<sup>m</sup>R<sup>m</sup>, -NR<sup>m</sup>-C<sub>1-4</sub>haloalkyl, -NR<sup>m</sup>-C<sub>1-6</sub>alkylNR<sup>m</sup>R<sup>m</sup> or -NR<sup>m</sup>-C<sub>1-6</sub>alkylOR<sup>m</sup>;
- 25 Y is NH; and
- Z is CR<sup>8</sup> or N.

174. A pharmaceutical composition comprising a compound according to any one of Claims 1-168 and a pharmaceutically-acceptable diluent or carrier.

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(US). KELLY, Michael, G. [GB/US]; 790 Sandoval Place, Thousand Oaks, CA 91360 (US). LIU, Qingyan [CN/US]; 4631 Paseo Girasol, Camarillo, CA 93012 (US). NORMAN, Mark, Henry [US/US]; 130 Venus Street, Thousand Oaks, CA 91360 (US). WANG, Xianghong [CN/US]; 11621 Country Springs Ct., Moorpark, CA 93021 (US). ZHU, Jiawang [US/US]; 77 Mahogany Lane, Simi Valley, CA 93065 (US).

(74) Agents: ODRE, Steven M. et al.; Amgen Inc., One Amgen Center Drive, M/S 27-4-A, Thousand Oaks, CA 91320-1799 (US).

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(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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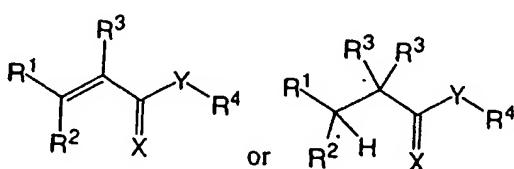
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(54) Title: VANILLOID RECEPTOR LIGANDS AND THEIR USE IN TREATMENTS



(57) Abstract: Compounds having the general structure of the Formula (I) and compositions containing them, for treatment of various diseases.

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**INTERNATIONAL SEARCH REPORT**

International application No.

PCT/US02/39589

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(7) : C07C 233/11; C07D 403/12, 413/12, 417/12, 265/36, 241/40; A61K 31/4418, 31/47, 31.489, A61P 31/12, 3  
US CL : 562/234; 544/106,353; 546/268.1, 282.7, 134; 548/152; 514/231.2, 249, 311, 336, 443

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

U.S. :

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
CASONLINE, EAST

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4,753,934 A (NICKL et al) 28 June 1988 (28.06.1988), see entire document, especially column 9 through column 43 for compounds.	1-20, 80-166, 168, 172, 173
X	US 3,940,422 A (HARITA et al) 24 February 1976 (24.02.1976), see entire document especially examples 1-67.	1-20, 80-166, 168, 172, 173
X	US 3,853,561 A (REICHEL et al) 10 December 1974 (10.12.1974), see entire document especially examples 1-7.	1-20, 80-166, 168, 172, 173
X	JP 63 154663 A (KANEKA FUCHI CHEM IND CO LTD) 27 June 1988 (27.06.1988), see entire document, especially pages 568-563 for compounds.	1-20, 80-166, 168, 172, 173
X,P	US 2003/0087922 A1 (BETHIEL et al) 08 May 2003 (08.05.2003).	21-55, 167

<input type="checkbox"/>	Further documents are listed in the continuation of Box C.	<input type="checkbox"/>	See patent family annex.
*	Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A"	document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"B"	earlier application or patent published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Z"	document member of the same patent family
"O"	document referring to an oral disclosure, use, exhibition or other means		
"P"	document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search	Date of mailing of the international search report
28 June 2003 (28.06.2003)	04 AUG 2003
Name and mailing address of the ISA/US	Authorized officer
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703)305-3230	Venkataraman Balasubramanian Telephone No. (703)308-1235

Form PCT/ISA/210 (second sheet) (July 1998)

**INTERNATIONAL SEARCH REPORT**

International application No.

PCT/US02/39589

**Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)**

This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claim Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claim Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
  
3.  Claim Nos.: 169,170,171 and 174  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as follows:

1.  As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3.  As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
  
4.  No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.

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93065 (US).

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GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,  
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,  
MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE,  
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(71) Applicant (*for all designated States except US*): AMGEN INC. [US/US]; One Amgen Center Drive, Thousand Oaks, CA 91320-1799 (US).

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European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
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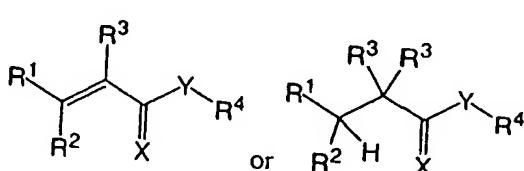
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